Zoology.

Field Notes.

San Bernardino Mts.

No. 15

1905 1907

J. Grinnell.

1907 [illegible] No. 2164
bird " 7919.

Take Censors of species.

Do more than one species of a genus occupy exactly the same area?

S & R up 1900 Zedogical & Forest Survey of S B Mts.

San Bernardino Mt. Expedition

June 10 - 1905

Came by rail to Redlands tonight & picked up the wagon which Jim Dixon had started with on the 8th. Made camp for the night between Redlands and Mentone.

June 11.

Came from Mentone to second power house up Santa Ana Cañon, between 6 and 11 this forenoon. Elevation of noon camp 2250 ft. In wash at mouth of cañon saw:- Bell Sparrow (many singing; also full-grown young); Cactus Wren (many nests, one containing 5 incubate eggs, another one fresh egg, and from each of two others at 6 am a roadrunner was frightened, evidently roosting there, for there was no sign of remodelling for a nest.); Texas Nighthawk (flying about and trilling until 6 o'clock); Black-chinned Sparrow (heard in cañon, several); Black-chin and Costa hummers (common, nest of latter 5 feet up in sycamore with two fresh eggs); Bullock & Arz. Hooded Orioles (nests with young); Bush tit (with young); Wrentit; Lawrence & Arkansas Goldfinch; Anthony Towhee; Shrike; Sparrowhawk;

Santa Ana Canyon

Cassin & Least Vireo (both in canyon mouth); Warbling Vireo (in alders); Rock Wrens (along big ditch near power house, singing loudly); Canyon Wren (heard once); Lazuli Bunting; White-throated Swift (few); Mockingbird; Rough-winged Swallow (4 flying over wash). Lizards are fairly common; took a new one, a coppery-headed smooth-skinned olive colored fellow, running very fast, much like a Cnemidophorus; also the latter, Uta, + Sceloporus; one snake L. boylei.

6435 Least Vireo ♂
6436 Canyon Wren ♂
6437 Cassin Vireo ♂
6438 Ariz. Hooded Oriole ♂
6439 White-throated Swift ♀
6440 " " " ♀
6441 " " " ♀
6442 Ariz. Hooded Oriole ♂

This afternoon continued on up the canyon, making camp early at about 2500 feet, below the "narrows". Load heavy, road rocky, horse lame! Rocks glaring the heat, which is very uncomfortable. A few alders and sycamores in places, but otherwise the canyon bottom is one mass of large

boulders. Costa Hummers are common, and 2 more nests were found over road on canyon side. White-throated swifts colonize every granite cliff. Rock Wrens are numerous; full-grown young seen. Linnets' nest seen in crevice in cliff.

June 12.

Put out a short line of traps last night & took one Perognathus (in sandy place in bottom of canyon), and 3 Neotomas (evidently fuscipes macrotis. Bullock oriole's nest with 3 young & 2 eggs in mistletoe clump on sycamore 20 feet up. A wood Pewee's nest on horizontal branch of same tree.

6443 Costa Hummer ♂
6444 Lazuli Bunting ♂
6445 White-Throated Swift ♀
976 Neotoma ♀
977 Perognathus ♀
6446 Costa Hummer ♂
6447 Anna " ♂

At noon came to foot of road in ~~Rattlesnake~~ Bear Canyon which leads up over the ridge. Country becoming more Lower Transition in complexion — Big-cone spruces and golden oaks on north slopes, where Violet-green Swallows, Olive-sided Flycatcher, &

Santa Ana Canyon

Black-throated Gray Warblers one to be seen. A nest of latter with young; also nests of Wood Pewee, Bullock & Ariz. Hooded Oriole, all with young; nest of Cliff Swallow on face of granite bluff; also many white-throated swifts nesting in crevices of broken granite faces; one of these was discovered by Joe Dixon, but proved inaccessible. It was in a crack about 2 inches wide at outlet narrowing back in, to ~~less~~, except at bottom of crevice which was weathered rather wider. On this bottom (composed of residual gravel) rested the nest which was 3 feet from outer edge of crevice, and could not be seen, until one had shaded his eyes for a minute so as to become accustomed to the darkness. Three eggs were in full view, & from their position there should have been 2 more. One was finally scooped out with a spoon at end of a long wire, but broken. It was pure white. The others rolled out of sight. The nest was saucer-shaped about 4 inches across possibly, & looked to be a firm felt-like mass of downy stuff. The crevice was about 20 feet up on a bluff composed of broken granite slabs. Others were doubtless there, but fully as inaccessible.

978 Nestoma ♂ juv.

979 " ♂

6448 Mallard ♂

Two mallards came flying up Bear Creek and lit on sand in shade near stream. Dixon succeeded in shooting the drake. This afternoon we made camp on brushy flat at about 4500 feet. This is a typically brushy belt — lilac, manzanita (with immense fruits), greasewood, scrub and golden oak, yuccas, Rhus trilobata, shaumus, etc. Here Bell Sparrows were common, & a full grown young taken. Also Black-chinned Sparrow singing in sparsest small-clump grease-wood — but very shy, & no nest located after an hour's search; also Anna Hummers, Spurred & Anthony Towhees, Vigors Wren, Pasadena Thrasher. In evening heard many poorwills, & high overhead the "pé-ark" of the Nighthawk (Ch. virginianus subsp); also several large bats, doubtless vespertilio and one smaller. Black-headed Grosbeaks & one Ariz. hooded Oriole, as well as several ash-throated Flycatchers were also seen here. Lizards — Uta, Sceloporus, Phrynosoma, & Cnemidophorus — were numerous here & a specimen of each was procured; but no snakes were seen.

Seven Oaks

6449 Bell Sparrow ♂
6450 " " ♀ juv.

June 13

6451 Lutescent Warbler ♂ juv.

Came up past Clark's Ranch to Seven Oaks this forenoon. At Clark's Ranch are extensive cienegas, but barely Transition; Saw there: Olive-sided Flycatcher (in the few spruces); Tanager; West. Bluebird; Cassin (?) Purple Finch; Mountain Quail; West. Red-tail (flying ruled); etc. Seven Oaks is down in the upper Santa Ana Canyon, 5000 ft.

6452 San Diego Song Sparrow ♂
6453 Yellow Warbler ♀
6454 Traill Flycatcher ♂

Around Seven Oaks the canyon is grown up to willows & alders, with Black & golden oaks on the sides & a few Coulter & Jeffrey pines. The birds are mainly upper Sonoran:— Traill Flycatcher (common); Yellow Warbler (nest & 4 slightly incubated Eggs); Spurred Towhee; Song Sparrow (2, undoubtedly breeding); Cooper Hawk (nest 35 up in alder, with 4 incubated eggs); Tanager (very few); Robin (few); West. Bluebird (few); Bush-tit; Wren-tit; Black-throated Gray Warbler (common); Lutescent Warbler (young taken); Warbling Vireo (nest at Clarke's Ranch in apple-tree with 3 incubated Eggs); Cassin Vireo (few); Violet-green Swallow (few); Ash-throated Flycatcher; Parkman Wren; + Cabanis Wdpks.

June 14

A small line of traps last night at 7-oaks yielded but two mammals:—

980 Neotoma ♀ 5000 ft.

987 Perognathus ♀ "

6455 Empidonax griseus ♀
6456 Audubon Warbler ♂
6457 " " ♀
6458 Blue-fronted Jay ♂
6459 " " ♂
6460 Cassin Purple Finch ♂
6461 Calliope Hummer ♂
6462 Brewer Blackbird ♂
6463 " " ♂
6464 Pine Siskin ♂

} Fish Creek and vicinity 6500 ft.

June 15

982 Neotoma ♀ 6500 ft.
983 " ♂ " "
984 P. gambeli ♂ " "
6465 Gray Flycatcher ♂ 8000 ft.
6466 " " ♂ " "
985 Eutamias speciosus ♀ 9000 ft.
6467 Nighthawk ♂ " "

Yesterday forenoon, 7 to 11:30, we came from Seven-Oaks to Fish Creek, where we are making our permanent camp. Shortly after leaving Oaks, Jeffrey pines became common, & soon

Fish Creek

also incense cedars; and with them the usual Transition birds. Here around our camp at 6500 feet, Jeffrey pines (and yellow pine) prevail on the hot or south slopes, white cedars are more numerous on shaded slopes, and with them many white pins, which become very common a little higher up. On some level benches a few hundred yards back of camp yellow pines & black oaks form the forest. The streams, Fish Creek & the Santa Ana, both small, which join in front of our camp, are lined with a peculiar willow, an alder, and a "balm-o'-gilead". In some of the hottest sandy parts of the valley are tracts of artemisia tridentata, while on the slopes beginning a little above are patches of Ceanothus cordulatus, & Arctostaphylos patula.

Right around camp birds are not numerous, the following species having so far been noted:- Sierra Junco; Sierra Creeper; Sierra Hermit Thrush (heard singing a little way up Fish Creek); Poorwill, Blue-fronted Jay; West. Wood Pewee; Green-tailed Towhee, Nest. Chipping Sparrow; Western Bluebird; Calliope Hummingbird; Gray Flycatcher (a nest in a willow 50 ft. from camp with 3 young newly-hatched), Cassin Purple Finch & White-headed Woodpecker.

6468 White-headed Woodpecker ♂ 6500 ft.

986 Eutamias speciosus ♀ 7000 ft.

June 16

6469 W. est. Clipping Sparrow ♂ 6000 ft.

6470 Louisiana Tanager ♂ 7000 ft.

6471 Green-tailed Towhee ♂ 6000 ft.

6472 Townsend Solitaire ♀ 7000 ft.

987 Eutamias ~~speciosus~~ merriami ♀ juv. " "

988 " " ♂ " " "

989 " " ♂ " " "

Yesterday morning I went up the ridge to the south towards Grayback. We got to about 9000 feet, approximately, where the snow began, and stopped walking; for it is hard and without spiked shoes difficult to walk up. The whole range above 9500 feet is almost solidly covered with snow. Jeffrey & yellow pines extend nearly to present snowline, but in small numbers upperly, being replaced largely by white firs. Cedars are scarce or wanting above 7000 feet. Several large junipers were seen at about 8000 ft, looking like cypress trees. But the berries scattered on the ground beneath served to identify. Flowers are blooming abundantly on the lower slopes; but at snowline spring

(Fish Creek-

is just breaking; willows are not leaved out yet, and except for the evergreens, little is up. At snow line great mats of Castanopsis appear, but below, the mats on exposed places and pockets are arctostaphylos and Ceanothus. The pockets or small benches on the W. side, are usually grassy & provided with clumps of a peculiar willow. Along seepage slides at the heads of canyons, brakes & Ribes are just coming out. At snow-line saw and heard:- Clarke Nutcracker (very few); Nighthawk (one flushed from bare ridge, and alighted crosswise of a pine limb, from which it was shot); Williamson Sapsucker (among a short-leaved pine, [which began to replace the firs at snow line = P. flexilis?], adult ♂, had peculiar cry); West. Bluebird (few); White-throated Swift (1); Green-tailed Towhee (few)

June 17.

990 Empidonax hammondi ♀ 6500 ft.
6473 Western Tanager ♂ "
6474 " " ♀ "
6475 Townsend Solitaire ♀ (with nest 2/4) "
6476 Gray Flycatcher ♀ "
6477 Plumed Partridge ♂ "
6478 Red-shafted Flicker ♂ "
6479 Cassin Purple Finch ♂ "

6480 Sierra Junco ♀ (with set 1/4) 7000 ft.

Yesterday Jim & I searched for nests about a mile up Fish Canyon, not over 7000 feet altitude I should think. Firs prevail, while there are more or less cedars, sugar and yellow pines. a Mt. Chickadee's nest with 6 newly hatched young was found in a vertical crevice of a black oak stub on canyon side. The entrance was not more than 3 feet above the ground. The parents were seen carrying food from a distance, and in this way it was located, for the old birds were extremely quiet, absolutely so while in the vicinity. They did their foraging at quite a distance up the canyon. The nest was a mass of soft down & fibres. A Sierra Hermit Thrushes nest with four fully-incubated eggs was discovered in a diminutive fir tree, not more than 5 feet high. The nest itself was only 3 feet above the ground, not at all well concealed in spite of the close fir foliage. The old bird was sitting, but flushed when I was yet 20 feet from her, & immediately disappeared. I saw her once again at a distance, & heard the peculiar nasal "squall" note, sometimes heard in winter. The

Fish Creek

exquisite song of the male bird was heard high on the canyon side. Several other old nests were found similarly located from 2 to 4 feet up in the smallest and densest firs. By the way, the nest with eggs was in a very shady & narrow part of the canyon within 6 feet of the brook, which was here lined with gooseberry bushes, and shaded by immense cedars & firs. Another new nest found was that of the Townsend Solitaire. A lone bird was first detected silently fly-catching near the ground under some pines. It finally flew over towards the creek, and a brief reconnoissance showed the nest, tucked under an overhanging rock on a shelving bank about 10 feet above the water. The nest material, pine needles, straggled down below the nest proper fully a foot. The nest was shallow saucer-shaped, and an inch deep by 3 in. across inside measurements. The ~~4 eggs~~ ~~of~~ above nest contained 3 newly-hatched young. Another nest contained four well-incubated eggs; this was similar in position and structure, but was fully 40 feet from the stream and only about 4 feet above level ground in a niche of the rock bank, roofed above.

June 16th

991	Neotoma	♀	6,250 ft.
6481	Audubon Warbler	♂	10,000 ft.
6482	Gray Flycatcher	♂	8,000 ft.
6483	Mountain Chickadee	♂	10,000 ft.
6484	West. Chipping Sparrow	♂	"
6485	Green-tailed Towhee	♀	9,000 ft.
486	Townsend Solitaire	♂	"
487	" "	♂	8,000 ft.
992	Ent. speciosus	♀	"
993	" "	♂	"
488	Mt. Chickadee	♂	"
489	Williamson Sapsucker	♂	9000 ft
490	Sierra "	♂	6500 ft.
994	Callospermophilus	♂	9000 ft.
995	"	♀	"
96	Neotoma	♂	6500 ft.
997	"	♂	"
998	Microtus	♀	"

Went up to summit of Grayback, 11,485 ft., today; left camp at 6:30 a.m. and reached top at 1:30 returning by the way of "dry" lake, now full, and South Fork canyon. At about 9500 ft. the forest of Jeffrey pine gives way to a solid forest of lodge pole pine, and on the rock slides of Grayback prospers from about 10,700 up, and [illegible]

[1st Creek to Trap Creek]

white bark pines. [illegible] I saw only a pair of rock wrens on a ledge projecting above the surrounding snow drifts; a couple of white-throated swifts flying in dizzy circles overhead; and a very light-colored hawk swooping down from the summit ridge. But down at about 10,500 feet toward the upper part of the timber pine belt, more birds were in evidence besides a few chipmunks (speciosus). Here were Audubon Warbler, Mt. Chickadee, Clarke Nutcracker, Gray Flycatcher & Western Chipping sparrow. Further down where timber & Jeffrey pines intermingle, 9500 feet, birds were numerous:— Nighthawks (several heard "pe-ark" and one flushed from a nest of 2 fresh eggs laid on bare gravelly ridge); Williamson sapsucker (several, one note very much like squall of a hawk); Western tanager; Townsend solitaire (1 or 2 singing from tops of pines, a very loud warbling, bubbly, song long continued, like purple finch a little); Stephens Fox Sparrow (several in ceanothus brush along with green-tailed towhees); etc., as above. In meadow near head of So. Fork, saw & heard a bird which I am sure was Colaveras Warbler (?); also [illegible] hawk

Creek, which is very tumultuous and full of falls, several Dippers; On ridge at about 9500 feet, saw a very large Jack Rabbit; also 2 deer, horns in velvet. Down So. Fork found a Hermit Thrushes nest 3 feet up in young cedar, with 3 ½-grown young.

June 19

6491 Cassin Vireo ♂ 6500 ft.
6492 " " ♀ " "
6492 West. Chipping Sparrow ♀ " "
6493 Cassin Purple Finch ♂ " "

At dusk every evening a pair or more of nighthawks come down over the pines from ridges above, with resounding "peaks"; and occasionally dropping through the air with the peculiar "whoof" of the eastern species. Poorwills are heard regularly from the south exposed pinyon and sage ridge across the creek to the north. Three sizes of bats are in evidence in the evening, but so far have defied capture. A pair or two of Lawrence's Goldfinches have been seen around camp here; down the canyon toward 7-oaks they are quite common; and several pairs of green-backed Goldfinches have been seen this side of 7-oaks. Cassin Purple Finches are

Fish Creek

surely breeding, but we have failed so far in finding nests & young. A curious thing is that we frequently meet with flocks of 4 to 7 adult ♂ (red) males, entirely by themselves feeding under pines, with no females in sight. Presumably the latter are incubating somewhere, while the males, so ciably inclined, gather into clubs! A male, in ♀ plumage, that is without a trace of red, but with very large testes was secured. Lazuli Buntings are numerous all along streams up to 8000 feet, at least.

June 20

999	Gray Squirrel	♀		6500 ft.
1000	Neotoma	♂		"
1001	"	♂ jv.		"
1002	"	♀ jv.		"
1003	"	♂ jv.		"
6494	West. Warbling Vireo	♂	(with set)	"
6495	" " "	♀	" "	"
6496	Olive-sided Flycatcher	♀		
6497	Cassin Vireo	♂		"
1004	Neotoma	♂		"

June 21+22

1005	Callospermophilus	♀	9000 ft.
6498	Black-throated Gray Warbler	♂	7000 ft.
6499	Audubon Warbler	♂	9000 ft.

6500	Ashy Kinglet	♂		9000 ft.
6501	Mountain Chickadee	♀	(with set 1/5)	"
006	Thomomys	♂		"
502	Empidonax	♀	(with set 4/4)	"
503	"	♂		"
6504	Green-tailed Towhee	♂		"
1007	Callospermophilus	♀		"
1008	"	♀		"
505	Sierra Hermit Thrush	♀		"
506	" " "	♂		"
6507	" " "	♂		"
6508	" " "	♂		"
1009	Thomomys	♀		"
1010	Neotoma	♀		"
509	Passerella stephensi	♂ jv.		"
510	" "	♀		"
511	Cabanis Woodpecker	♀		"
1011	Eutamias speciosus	♀		"
012	" "	♀		"
1013	" "	♂		"
6512	Williamson Sapsucker	♂		"
6513	" "	♂		"
6514	" "	♀		8500 ft.
6515	Clark's Nutcracker	♀		"

Dry Lake

June 23

1014 Neotoma 2 ♂♂. 6500 ft.

1015 Peromyscus (maior?) 5 ♂♂. " "

Joe Dixon & I spent the night of the 21st at Dry Lake (Tuolumne Co.), packing our blankets & outfit, and collecting both ways the 21st & 22nd. Right around Dry Lake, met with the following birds:- Rock Wren (a bird in full song on a rocky hillside west of the Lake a few rods); Western Robin (a pair); Western Bluebird (very few); Sierra Hermit Thrush (singing in the evening & morning from the tops of tamarack pines, on the mt. side, in one case above a large snow-drift; they frequently came down to drink at the seepage streams when they could be shot; at other times they were very shy; the song, so characteristic in here no less impressive than up north); Ashy Kinglet (several males singing volubly, & with remarkably carrying loudness for so small a bird; they keep in the tops of the tallest tamarack pines); Mountain Chickadee (fairly common; 3 nests found — one with five incubated eggs 25 feet up in a crevice behind the bark of a dead fir stub; another with 7 small young in a cavity even with the surface of the ground in a [illegible] pine stub; [illegible] the small

young in a knot hole of a fir stub 2½ feet up; these nests were made of a few feathers with a felted mass of hair of deer, wood rat, & possibly rabbit, tho the latter animals are exceedingly scarce); Gray Flycatcher (fairly common; a nest found, 10 feet up in a tamarack pine sapling growing among larger trees very near the lake; the ♀ was shot as flushed, & is greener above & yellower beneath, than any others I have taken, looking more as I recall the coloration of E. wrightii, instead of canescens; but a ♂ shot nearby is large and very gray, as in the latter. They have a jumbled gurgulous song, besides the soft "pit", which resembles in composition of syllables that of the Black phoebe); Western Chipping Sparrow (several in fallow trees & about edge of lake); Cassin Purple Finch (common; adults feeding full-grown young); Cabanis Woodpecker (several among dead Tamarack Pines, pounding with a resonant rattling roll on branches of different tone, very effectively like xylophone!), Red-shafted Flicker (one called close to lake); Williamson Sapsucker (the commonest woodpecker; notes, a wheedling sound, and a louder hawk-like squall; 2 nests found, one with

Fish Creek to Dry Lake

3 small young & 2 infertile eggs, and another with 4 somewhat larger tho' unfeathered young. One nest was 20 feet up and the other 12 feet up in live, but dead hearted, limber pines. In each case there were three holes one above the other, 18 inches or so apart, doubtless of different seasons; the food appears to consist entirely of ants, which are not regurgitated, even with the smallest young, for the bills of the adults shot, and "Cliff" way, to the throat, were crammed with ants; there are no characteristic sapsucker borings in the pines anywhere around the lake, in fact only in the alders along the streams much lower down the mountains (which sapsuckers doubtless descend to in winter); Audubon Warbler (many around, singing, & carrying insects doubtless with broods); Calliope Hummer (a ♂ near the lake acted as tho she had a nest); Clarke Nutcracker (very few); Green-tailed Towhee (several pairs in manzanita thicket above the lake on the north side [south slope]); Stephens Fox Sparrow (brood of nearly fledged young with adults flushed from manzanita thickets above referred to); Sierra Junco

(fairly common around cienegas, one of which is on hillside just north of lake); Wes. Wood Pewee (common and first bird in the morning to be heard, actually before daylight — and last at night; nest on dead horizontal branch of limber pine, on shore of lake, 12 feet up; bird sitting, & ♂ inconspicuous); Slender-billed Nuthatch (1 in pines near lake); Townsend Solitaire (long-continued & voluble song often heard from pine tops in vicinity); Nighthawk (in morning, in spite of frost, and evening "came down from ridge to feed over lake; "chorping" common & frequent, and "pe-ark" continuous).

Our small traps brought us nothing, and there were no signs of any mammals, (not bear & foxes, outside of chipmunks; except for a wood rat's nest, from which a Western was taken, a few rods below the lake; and gophers which were evidently common about the cienegas; two were secured, of which the old male is immense as to general size, and clean teeth in particular; no bats seen. Two kinds chipmunks. Eut speciosus & Eutamias ~~hopiensis~~ umbrinus evidently common about logs & rock ledges.

Fish Creek

6516	Sierra Junco	♂ jv.	6500 ft.
6517	Townsend Solitaire	♂ jv.	"
6518	Clarke Nutcracker	♀ jv.	"
6519	Western Bluebird	♂	"
6520	Violet-green Swallow	♀	"
6521	Green-backed Goldfinch	♂	"
1016	Thomomys	♂	"
1017	Myotis	♂	"

June 24

1018	Peromyscus gambeli	♂	"
1019	" "	♂	"
1020	" "	♂	"
1021	Neotoma	♀	"
1022	"	♂	"
1023	"	♂	"
1024	"	♂	"
1025	"	♀	"
1026	"	♂	"
1027	Peromyscus ?	♂	"
1028	" "	♂	"
1029	" "	♀	"

A Cassin Vireo's nest was found on the 24th at about 6800 feet elevation in Fish Creek Canyon. It was suspended, as usual from twigs of an Incense Cedar, 9 feet up; it contained 3 eggs nearly ready to hatch. During a short walk up Fish Creek

Canyon yesterday morning, I saw a pair of Lawrence Goldfinch; a Ruby Kinglet, singing loudly; Several warbling and Cassin Vireos; young, but nearly-fledged Juncos; Calliope Hummers, a ♀ gathering willow-down, but darting off with it so quickly that the eye could not follow her among the trees; Solitaire's nest, same as discovered a week ago, with young now well-feathered with peculiar spotted juvenile pattern; Audubon Warbler, 2 nests with young found 20 feet up in pine by Jim Dixon about June 21; Tanagers, nest with young found; etc.

Trapped last night over on foothills facing south of Sugarloaf Mt.. There, Artemisia, Pinyon, & Juniperus occidentalis prevail. Wood rat's nests are common, and very large, composed of chunks, rather than long sticks, such as result from breaking up of dead pine branches. The species seems to be not N. f. macrotis, like the woodrats of Pasadena vicinity; but are much paler, more like the N. f. simplex, which we collected last year in the vicinity of Lyon pass in the sage & pinyon country. The Perognaths gambeli were caught only in the sage bank; while the other Perognaths were found only about old rat's nests &

(Fish Creek

legs. This latter has tremendously big ears, & long hair, & tho very pale brown, reminds me mostly of P. truei of the Mt. Pinos sage belt.

6522 Sierra Junco ♀ jv.

6523 Black-throated Gray Warbler ♀ 7000 ft.

6524 House Finch ♂ 9800 ft.

6525 Cassin Purple Finch ♂ "

6527 Western Bluebird ♀ "

June 25

1030 Neotoma ♂ 6500 ft.

1031 " ♀ "

1032 " ♀ "

1033 " ♂ "

1034 Eutamias merriami ♂ "

1035 Perognathus gambeli ♀ "

1036 " " ♀ "

6426 Sierra Junco ♂ "

June 26

1037 Neotoma ♂ "

1038 " ♂ "

1039 " ♂ "

1040 " ♂ "

1041 " ♂ jv. "

1042 Eutamias merriami ♀ "

10403	P. gambeli	♂	65-00 ft
6528	Sierra Creeper	♂ jv.	"
6529	" "	♂	"
6530	Lutescent Warbler	♂ jv.	"
6531	" "	♀	"
6532	Lawrence Goldfinch	♂	"
6533	" "	♀	"
6534	Lazuli Bunting	♀	"
6535	Audubon Warbler	♂	"
6536	" "	♀	"
6537	Gray Flycatcher	♂ jv.	"
6538	West. Wood Pewee	♀	"

Went down the Santa Ana a couple of miles this morning. Found a Sierra Creeper's nest, 3 feet above ground in crevice behind loosened bark of live Jeffrey pine some 2 feet in diameter. The nest was of course fitted into the narrow vertically crevice, and was composed basally of strips of cedar bark, and internally of very fine shreds of inside bark of dead willows, such material as the Lazuli Buntings, wood pewees & gray flycatchers use. The nest held six half fledged young one of which was preserved. While we were there, one of the parents came with a large insect in bill, flying [illegible]

nest of an adjoining tree first and then the base of the nest tree from which it crept directly to the nest aperture. Found also a woodpecker's nest 12 feet up on a horizontal branch of a balm-o'-gilead, with 3 small young, and another similarly situated 6 feet up, with one fresh egg. Saw one Mourning dove, & the boys say they have seen several others. Also a ground squirrel (Sp. beecheyi) of which several have been seen hereabouts, along the Santa Ana way. Lawrence Goldfinches are quite common, & the ♀ secured contained a large yolk. The Lutescent Warblers, adult & juvenile were seen in willow thickets at mouth of South Fork, where also was seen & heard a couple of Spurred Towhees. Slender-billed Nuthatches, West. Bluebirds, Lazuli Buntings, Pygmy Nuthatches, Cassin Purple Finches, Cassin & Warbling Vireos, were also seen more or less commonly.

June 27

Came to So. Fork Cienega (8550 ft. to 9000 feet) by pack-mule this morning.

6539	Nighthawk ♀	7000 feet.
6540	Calliope Hummer ♂	8500 feet.
6541	Lincoln Sparrow ♂	"
6542	" " ♂	

6543	Sierra Hermit Thrush	♂	8500 ft.
6544	Golden Pileolated Warbler	♂	" "
6545	" " "	♂	" "
6546	Stephens Fox Sparrow	♀ jv.	" "
6547	" " "	♂	" "
6548	" " "	♀	" "
6549	" " "	♂	" "
6550	Audubon Warbler	♀	" "

June 28th.

1044	Thomomys	♂ jv.	So. Fork Cienega 8500 ft.
1045	Myotis	♂	" "
1046	P. gambeli	♂	" "
1047	Microtus	♀	" "
1048	Microtus	♂	" "
1049	Thomomys	♀	" "
1050	Callospermophilus	♀	" "
1051	"	♀	" "
6551	Western Robin	♀	" "
1052	Callospermophilus	♀	"
6552	Western Bluebird	♂	" "
1053	Eutamias	♀	" "
6553	Calliope Hummer	♂	" "
6554	Stephens Fox Sparrow	♂	" "

This afternoon walked up past the Cienega to the snow-line and then east to base of "Toyabe" proper & back by way of Dry Lake.

all above this is in the Murray and limber pine belt. Here at camp is a mixture; within a hundred feet are limber, yellow, Jeffrey pines, and white fir. Towards the base of the Graybark slides, is a very broken plateau, with broken rock ridges interspersed with sink holes and ravines ending blindly. This plateau is covered with limber & Murray pine & chinquapin - practically nothing else, except very rare grass tufts. In this plateau woods birds are extremely scarce. During two hours this afternoon, I saw in it, but one Williamson Sapsucker, a squad of perhaps six nutcrackers, one family of Juncos 2 or 3 gray flycatchers, several Audubon Warblers, 1 or 2 Mt. Chickadees, & one Hermit Thrush. But here in the willows & wet grassy meadows, beneath lofty pines & firs, birds are more numerous than any place we have been this side of Seven Oaks. Fox Sparrows are quite numerous, with broods of nearly-fledged young (but we are apparently entirely above the habitat of the Townsend Solitaire,

which we met with commonly in the Ceanothus cordulatus on the way up).
Lincolns Sparrows appear to be fairly common and must be breeding, for we see birds carrying insects; they are secretive, among the willows and rank vegetation; one was perched at tip of dead willow stick, singing a "sizzling" song, which wasn't heard closely enough to remember or describe. Juncos are about the most abundant bird. Nearly full-grown young are about, while 2 sets of 4 eggs, and one of 3 (fresh to advanced) have been found; nests on ground under tussocks of grass, or a large-leafed herb. Gray Flycatchers are about, but very wary. Audubon Warblers are common, and Dixon secured an inaccessible nest 20 feet up, out at end of lower branch of a huge yellow pine. Wood Pewees are common; a nest with 3 heavily incubated eggs, 9 feet up on slanting dead willow among living ones. A few Robins & W.-T. Bluebirds are to be heard and seen; also Creepers, Chickadees, Blue-fronted Jays, Calliope Hummers (feeding about Ribes bushes), and 2 Rufous Hummers (first seen).

June 29

6555	Sierra Creeper	♂	8500 ft.
1054	Callospermophilus	♀	" "
6556	Lincoln Sparrow	♂	" "
6557	" "	♂	"
1055	Callospermophilus	♀	" "
6558	Sierra Junco	♀ jv.	" "
6559	" "	♀	" "
1056	Callospermophilus	♀	" "
1057	Eutamias	♂	" "
6560	Am. Dipper	♂ jv.	" "
1058	Eutamias	♀	" "
6561	Stephens Fox Sparrow	♀	" "
6562	" " "	♂	" "
1059	Eutamias	♀	" "
6563	Sierra Hermit Thrush	♀	(Dry Lake) 9000
6564	Rock Wren	♂	" " " "
1060	Eutamias	♀	8500 ft.
1061	Minotus	♂	" "
1062	"	♂	" "
1063	"	♂	" "
1064	"	♂	" "
1065	"	♂	" "
1066	Peromyscus gambeli	♂	"
1067	" "	♀	" "
6565	Calliope Hummer	♂	" "
6566	Pine Siskin	♂	"

6567 Sierra Junco ♂ 8500 ft.

Today saw a pair of Tanagers near camp, and a pair of Warbling Vireos, both probably having nests nearby. Heard a chipmunk (speciosus) scolding, and a pair of wood pewees excitedly calling. Investigation showed the chipmunk in the act of robbing the wood pewee's nest; or rather, he had just completed the job, doubtless; for I climbed up & found the nest empty; the "aux" fought the culprit down. This nest was ten feet up, saddled on the forks of a horizontal pine branch, six feet out from the main trunk. The nest, as with those of Flycatchers, Lazuli Bunting, and vireos heretofore, was composed largely of the delicate papery inner bark stripped from dead and weathered willows. A flicker has its nest in a dead yellow pine 78 feet (by Hollis' estimate from triangulation) up. The bird visits it regularly, & on arriving prior, 3 "claip" notes, and then inserting his bill into the entrance, "pumps" several times, evidently disgorging a consignment of nuts. In the same tree near the ground, or rather about 15 feet up, a pair of creepers are regularly feeding young

So. Fork Santa Ana

to a crevice in the loosened bark. Full-fledged young of Cassin purple finches are about, with querulous food calls, reminding one both of a young linnet and a young black-headed Grosbeak. Have also seen in the near vicinity a dipper, on one of the little contributary streams right by camp; several siskins; a pair of green-tailed towhees, in the chinquapin brush on the hill-side; a ♂ Lazuli Bunting in the willows, at the extreme upper end of Cienega, near the snow drifts. Several bats are seen high among the pines of evenings, a large one, doubtless Vespertilio; and a smaller, rapidly flittering one, which is a Myotis (one shot). Dixon found a squad of full-grown dippers a little ways down the creek, and shot one. He notes that it had assumed a statuesque, motionless attitude on a rock in the stream, as if to escape notice by being inconspicuous. The small traps have yielded only Perognathus gambeli and a small species of microtus so far, though I have been trying to tempt shrews, if there are any here. The spider-webbing

are conspicuous by their inconspicuousness; there are no mounds above the grass, only smoothly-clipped holes, filled up flush with the surface, so that the presence of gophers might be altogether overlooked without close scrutiny.

1068	Callospermophilus	♀		8500 ft.
1069	"	♂		"
6568	Calliope Hummer	♂	(June 30)	"
1070	Callospermophilus	♂		"
1071	"	♂		"
6569	Clarke Nutcracker	♂ jv.	(June 28)	9500 ft.
6570	" "	♂ jv.	(" ")	" "
6571	" "	♂	Graybark	10,000 "
1072	Callospermophilus	♂		8500 ft.
6572	Rock Wren	♀ jv.	Graybark	11,450 ft.
1073	Thomomys	♀		8500 ft.
6573	Rock Wren	♂ jv.	Graybark	11,450 ft.
6574	" "	♀ jv.	"	" "
6575	Audubon Warbler	♂	"	10,000 ft.
1074	Eutamias	♀		8500 ft.
1075	Microtus	♀	(June 30)	"

June 30

Heard a Lawrence Goldfinch flying over the upper part of the cienega. Found a Thrasher's nest 2 feet up in a dense tuft

So. Fork S. Fk. Kern

growing in a patch of chinquapin quite a ways from the creek. There were 4 young so fledged that they flew from the nest when alarmed. Saw a couple more ♂ rufous hummers. On the way down, at about 7500 feet, on the ridge west of the South Fork, met with a family of apparently half a dozen Brewer sparrows in the Ceanothus brush; two full-grown juveniles were secured. Also found a Mt. Chickadee's nest 7 feet up in a rotten pine stub, old woodpecker hole, with 4 nearly full-grown young. Came back to base camp at 7th Creek tonight.

6576	Sierra Junco	♀	8500 ft.
1076	Callospermophilus	♀	" "
6577	Sierra Hermit Thrush	♀	" "
6578	" " "	♀ jv.	" "
6579	" " "	♀ jv.	" "
6580	" " "	♂ jv.	" "
1077	Callospermophilus	♂	" "
1078	"	♀	" " "
1079	"	♂	" "
6581	Mountain Chickadee	♂ jv.	8000 ft.
6582	" "	♂ jv.	" "
6583	Brewer Sparrow	♀ jv.	7500 ft.
6584	" "	♀ jv.	"
1080	Eutamias speciosus	♀	8500 ft.

6585	Cabanis Woodpecker	♂	7000 ft.
1081	Vespertilio	♂	6500 ft.
6586	Lazuli Bunting	♂	6200 ft.

July 1

1082	Neotoma	♀	6500 ft.

June 1

1083	P. gunnisoni	♂	6500 ft.
1084	Vespertilio	♂	"
6587	Clarke Nutcracker	♀	"
6588	Gray Flycatcher	♀ jv.	
6589	Sierra Junco	♀ jv.	
1085	Neotoma	♂	"
6590	Sierra Creeper	♂	"
6591	Western Chipping Sparrow	♂	"
1086	Neotoma	♀	
1087	"	♂	"
1088	"	♂	"

July 3

1089	Gray Squirrel	♀	"

Today went up to a cienega at about 6700 feet elevation on the south face of Sugarloaf about 1½ miles from the Fish Creek Camp. The region shows well the effects of slope exposure. There are no firs or cedars, Jeffrey pines being the prevailing timber, while many western junipers and pinyons,

Fish Creek

extensive clumps of scrubby golden oak show a much lower zone, apparently an extreme upper sonoran merging into lower transition. Between the trees and on the driest faces of the hillsides, sage prevails. The cienega itself is a grassy sloping meadow produced by a spring, or several of them, making out of the mountain side. Several sonoran birds were here in evidence, the highest we have seen them: — several pairs of mourning doves; several Calif. Jays (Aphelocoma); a large band of bush-tits (Psaltriparus); a vigorous wren (probably Thryomanes b. charientus); several Spurred Towhees; a Sparrow hawk. While in exactly the same locality were, a family of Pygmy Nuthatches; a band of Clarke Nutcrackers; a Green-tailed Towhee (in full song); Western Chipping sparrow; W. T. wood pewee; Blue-fronted Jay; families of Bluebirds [western; have so far failed altogether to find arctica, even on the highest ridges about. Grayback]; Cassin Purple Finch; Cabanis Woodpecker; Violet-green Swallow [apparently limited strictly to transition; not seen above 7000 ft. at the south side of Santa Ana]. Among mammals, "signs" of deer & jack-rabbit

were seen about the meadow; a very small rabbit, apparently *S. cinerascens* or an allied form, was seen in the sage; a few ground squirrels (*Spermophilus beecheyi*), and one ♀ gray squirrel, and a few Merriam chipmunks [strictly upper sonoran and lower transition]; wood rat heaps of large size common in brush; from these we have taken most of the recent series of Neotoma. A rattlesnake, the blackest I ever saw, almost solid black dorsally, was almost stepped on at the edge of the cienega. Its drowsiness is to be accounted for by its stomach holding an entire recently-swallowed-head-first Merriam chipmunk. Snakes are quite scarce; have only seen two, rattler and striped racer (*Bascanion* = *Eutainia*!). Frogs are common in the creek, and a toad was seen in Dry Lake (9000 ft.). The streams are well-supplied with Trout (caught 3 ♀ 5- to 9-inch in two hours last night), but no other kinds of fish have been noted. Insects are abundant, especially flies, a black [illegible] fleshfly [illegible] by a [illegible] body in [illegible] numbers [illegible] by [illegible]; this was especially noticeable [illegible] Dr. Fork camp, 10000 feet.

Fish Creek

6592	Clarke Nutcracker	♀	6500 ft.
1090	Neotoma	♀	" "
1091	"	♂	" "
6593	Cabanis Woodpecker	♂ jv.	" "
6594	Blue-fronted Jay	♂	" "
1092	Neotoma	♂	" "
6595	Pygmy Nuthatch	♀	" "
6596	Western Chipping Sparrow	♂	" "
6597	" " "	? jv.	" "
6598	Cassin Purple Finch	♂	" "

July 4

6599	Western Yellow Warbler	♂ jv. (im.)	6500 feet.
1093	Neotoma	♂	" "
1094	"	♀	" "
6600	Cassin Vireo	♀ jv.	7000 feet.
6601	" "	♀ jv.	" "
6602	" "	♀ jv.	" "
6603	Calliope Hummer	♀	" "
6604	" "	♀ (with nest)	"
1095	Vespertilio	♂	6500 feet.
1096	"	♂	" "
6605	Townsend Solitaire	♀ jv.	7000 "
6606	" "	♂	"
6607	Sierra Junco	♂	" "
6608	Am. Dipper	♂	"
6609	Slender-billed Nuthatch	♀	6500 ft.

6610	Sierra Creeper	♂	7000 feet.
6611	"	♂	" "
6612	"	♀	" "
6613	Cassin Vireo	♂	" "
6614	Gray Flycatcher	♂	" "
6615	Cabanis Woodpecker	♀ jv.	" "
6616	Sierra Sapsucker	♂	" "
6617	Brewer Sparrow	♂ jv.	6800 "
6618	White-headed Woodpecker	♂	6500 "

This forenoon went up Fish Creek Canyon several miles, then east over a low divide into Big Meadows, and back down the trail to camp. Birds were quite common in the canyon, and many good species were secured as the above list shows. A Calliope Hummer's nest was located 35 feet up in a 100-foot fir. It could not be seen either from above or below because built on an inch-thick branch between two others, vertically, & a large drooping dead branch projecting among fine & heavily leaved boughs! It was discovered by seeing the hummer leaving the tree, as a shot was fired at a creeper a few yards off; presently she returned, & was again driven off by throwing up sticks; but from the ground the exact location of her disappearance could not be determined. Dixon climbed

Fish Creek

up, the first 20 feet or so being very difficult on account of lack of reliable branches, the rough bark being the only thing to cling to, & the trunk too large to "hug." The branch with the nest was finally broken off, and in so doing the single small squab which it contained, jolted ~~#~~ out, & was lost, probably lodging in the boughs beneath. The nest was safely gotten to the ground, by successive lowerings from limb to limb as Dixon descended. The ♀ bird was secured. Another ♀ was shot, contained in oviduct an egg fully formed all but the shell, & another nearly full sized yolk in ovary; this shows that even at this late date fresh eggs may yet be found. An Audubon Warbler's nest, found June 21 with young, was obtained & dissected. It was 20 feet up near end of a shortish drooping fir bough, and looked much like a Black-throated Gray's nest. Externally it was compactly woven of weathered grass stems, frazzled, & tail & wing feathers of juncos & other small birds. Internally it was thickly lined with mountain-quail feathers, some of the chestnut ones of which stood above the rim noticeably. A Cassin Vireo's nest with 3 half grown young was found suspended from branching twigs a end of lower drooping bough of young incense cedar, 9 feet up. The sparse foliage of the latter rendered the

nest conspicuous, or rather plainly to be seen, after one's eye had once rested on it; but from beneath its light color blended rather protectively with the broken light & foliage above. The ♂ bird was singing violently in an adjoining tree. Many young juncos are now going about; also young creepers & blue-fronted jays. Heard the winter bell-like note of the solitaire for the first time today. Found a white-headed woodpeckers home excavated 7 feet up in a dead pine stub, full of squealing young. The Sapsucker's mouth was full of ants, so it, too, probably had a nest nearby. It is notable that ants are particularly abundant not the vile-smelling variety, but tree & bush ants, & these seem to form the bulk of the food of woodpeckers, solitaires juncos, etc.

At Big Meadows, saw several robins, Brewer Blackbirds, feeding young; a black phoebe; many Cassin purple finches. And in a sage flat at the lower end a flock of fully a dozen Brewer sparrows, one of which, a full-grown juvenile, was secured. The taking of a Yellow warbler, in almost complete fall male plumage (juvenal almost every bit gone), is notable; this may possibly be considered a migrant.

Fish Creek

July 5

1097 Ground Squirrel ♀ 6500 ft.
1098 Mephitis ♀ "

This morning went up Fish Creek a ways, and then across one of the benches to the westward. Found two Gray Flycatcher nests; the first held 3 half-fledged young, & was 6 feet up straddled among the dead twigs of a fallen branch leaning, inverted, against the main trunk of a medium-sized black oak. It was in every way similar to those already taken, that is, in general size and composition. The second nest was barely completed and empty, and was built on top of a live horizontal black oak limb some 8 feet up, something after the manner of a western yellowthroat. I saw the bird leave the nest, and in this way discovered it. Saw a large owl, I thought the spotted owl, flush from a dark fir & fly down a ravine. Couldn't get a shot at it, and can't be sure of the species. Located a creepers nest, as usual behind the loose bark of a dead tree (fir). A pair of white-throated swifts just now fell, clasped, from up high somewhere, down nearly to the willows in front of camp, & then separating & fly off twittering loudly. This seemed to cause excitement among some [illegible] swallows flying in the vicinity.

6619 Gray Flycatcher ♀ jv. 6500 ft.
6620 Sierra Junco ♂ " "
6621 Sierra Creeper ♀ jv. " "
6622 h. st. Warbling Vireo ♂ " "
6623 Blue-fronted Jay ♂ " "
6624 Gray Flycatcher ♀ jv. " "
6625 Cassin Vireo ♂ " "
6626 Gray Flycatcher ♂ " "
6627 " " ♀ " "
6628 " " ♀ " "
6629 " " ♀ " "
6630 White-headed Woodpecker ♀ jv " "

July 6

7099 Nestoma ♀ " "
6631 Calliope Hummer ♂ " "
6632 " " ♀ " "
7100 Perónyscus gambeli ♂ " "
7101 " " ♀ " "
6633 Gray Flycatcher ♂ " "
6634 " " ♀ " "

Found another Gray Flycatcher nest in the lower Fish Creek canyon. It contained one egg & the bird was flushed from it; located in upright forks of balsam-poplar, each fork about 2 in. in diameter; composition as usual, but general bulk rounder less. This afternoon from 3 to 6:40 came down to near Swan Lake, & made camp

1 Seven Oaks

July 7.

Camp ½ mile above Seven Oaks; elev. – 5000 feet.

1102 Neotoma ♂ "
1103 " ♀ "
1104 P. truei ♀ "
1105 Eutamias merriami ♂ "
1106 " " ♀ "
6635 Black-headed Grosbeak ♂ "
6636 Brewer Sparrow ♀ jv. "
6637 " " ♀ jv. "
6638 Western Wood Pewee ♀ jv. "
6639 Black-throated Gray Warbler ♂ (moulting) "
6640 Spurred Towhee ♂ "
6641 Western Gnatcatcher ♂ "
6642 Western Chipping Sparrow ♂ "
6643 " " " ♂ jv. "
6644 " " " ♀ jv. "
6645 " Lawrence Goldfinch ♀ "
6646 " San Diego Wren ♀ jv. "

July 8th

1107 neotoma ♀ "
1108 Gray fox (902 – 383 – 131) ♂ "
1109 Myotis ? (no skull) "
6647 West. Warbling Vireo ♂ "
6648 Black-throated Gray Warbler ♀ (moulting)
6649 Lazuli Bunting ♂ jv.
6650 San Diego Song Sparrow ♂ "

1110	Peromyscus truei	♂ jv.	5000 ft.
1111	" "	♂	" "
112	" "	♀	" "
6651	Blue-fronted Jay	♀	" "
6652	Western Bluebird	♂ jv.	" "
6653	" "	♀ jv.	" "
6654	" "	♂ jv.	" "
6655	" "	♂ jv.	" "
113	Neotoma	♀	" "
1114	"	♀	" "
6656	Ash-throated Flycatcher	♂	" "
6657	West. Chipping Sparrow	? jv.	" "
6658	" " "	♀ jv.	" "
115	Neotoma	♀	" "
116	"	♀	" "
1117	Eutamias merriami	♀	" "
1118	Neotoma	♀	" "
1119	"	♂	" "
1120	Myotis	♀	" "

July 9

[illegible] is a little different in geographical complexion from Fish Creek and vicinity. It is less arid (no Artemisia tridentata or juniper or pinyon), and at the same time perceptibly lower in temperature belt (that is several degrees warmer). It is nearer the modifying

Seven Oaks

influence of the ocean breezes from the west, with their greater relative humidity. The stream is heavily lined with large alder, cottonwood (P. trichocarpa) and willow. The valley edges are clothed with golden-oak, on the south side (= north slope toward Mt. San Bernardino 4 miles distant) with Black Oak, and a table land (with south exposure) extending back from the valley north to the mts. toward Bear Valley of almost pure chaparral belt tone, with scrub oak, a low zone manzanita, and buck-thorn (= Ceanothus sp.?), forming a very dense brush cover. The coniferous trees are mainly along the water courses & on north slopes, in the dryer places many Coulter pines, Jeffrey pines prevailing elsewhere. The chaparral belt shows the following birds & mammals:- Pasadena Thrasher, Bush tit, Brewer Sparrow (many, full-grown young), Black-chinned Sparrow (singing commonly but difficult to approach), Spurred Towhee, Anthony Towhee (only 2 seen), San Diego Wren, Wren tit (quite commonly heard); Ash-throated Flycatcher (pair evidently has nest in golden oak); In the golden oaks & mixed pines are Nuttall Woodpecker, Calif. Woodpecker (several); Red-shafted Flicker,

Pygmy & Slender-billed Nuthatch (both fairly common & with full-grown young); Red breasted Sapsucker (one seen & heard, most likely foraging away from headquarters in the alders, which seem to be their favorite haunt, as we saw several [?] near mouth of South Fork); Western Chipping Sparrow (full-grown young very numerous); Tanager (very few); Western Bluebird (families of full grown juveniles); Western Gnatcatcher (several; a nest seen this morning in process of construction 20 feet up among terminal branchlets of limb of dead Jeffrey pine; both birds were building, singing material & mounting the nest alternately, the ♂ singing the while almost constantly); Violet-green Swallow (family of young 25 feet up in woods on under side of dead pine branch, not yet flown); W.T. Wood Pewee; Black-throated Gray Warbler (adults, now song-less, in midst of moult); House Finch (linnets, adults & young are fairly common). In the alders & willows along the stream & about meadows are the following:—

Black-headed Grosbeak (common); Lazuli Bunting

(full grown young ♂ taken; adults seen commonly); San Diego Song Sparrow (several in arroyo, rose & nettle thickets); Cassin & West. Warbling Vireos (equally common, & still in full song); Parkman Wren (family of mature young in wood piles along stream); Calif. Yellow Warbler (still in song); Traill Flycatcher (a few in densest willow thickets); Black Phoebe (several). Several hummers have been seen, not the Calliope however. In the brush belt chipmunks (Eut. Merriami) are common, & a large pale (fuscipes style) wood rat is numerous. A Peromyscus of the boylei style is present, but not trapped in satisfactory numbers as yet. And a pocket gopher was taken this morning under a golden oak among the litter of leaves, not in sandy place where usually to be expected. Gopher workings are in evidence, and mole ridges plentiful. I saw one cottontail in the brush belt, & jacks are reported as occasional up at "Convers flat" a dryer sagey plateau 2 or 3 miles NE of here. Fox tracks are very numerous, & a "lynx" is reported as living in the vicinity. Bats are not numerous; Myotis & Vespertilio so far recognized. A few ground squirrels are seen a little

ways above here. Among reptiles, Horned toads & Sceloporous biseriatus are most in evidence; a few Uta & one Xenosaurus noted.

1121 Perognathus ♀ 5100 ft.
1122 Peromyscus ♂ " "
1123 Eutamias merriami ♀ jv " "
1124 " " ♀ " "
6659 San Diego Wren ♀ jv. " "
6660 Cassin Vireo ♂ " "
6661 Parkman Wren ♂ " "
6662 " " ♀ jv. " "
6663 Spurred Towhee ♀ jv. " "
1125 Neotoma ♀ jv. " "
6664 Bush tit ♀ jv. " "
6665 " ♂ jv. " "
1126 Citellus beecheyi ♀ " "
6666 Nuttall Woodpecker ♂ " "
6667 Mountain Chickadee ♂ (moulting) " "
6668 West. Warbling Vireo ♂ " "
6669 San Diego Wren ♂ jv. "
6670 Lutescent Warbler ♀ im. "
1127 Neotoma ♂ " "
6671 Western Chipping Sparrow ♂ " "
6672 " " " ♀ jv. " "
6673 Brewer Sparrow ♀ jv. " "
6674 Cooper Hawk ♀ jv. "

Seven Oaks

July 10

Several Nat. Chickadees in Jeffrey pines; adults in midst of moult & very quiet, now paying little attention to the troubles of the juveniles. A nest of Cooper Hawk 30 feet up among small side branches against trunk of tall cottonwood; young just leaving nest, and squalling lustily on being disturbed. Lutescent warbler in post juvenal moult, 1st annal plumage being the prevailing feather.

1128	Thomomys	♀	5000 ft.
1129	Eutamias merriami	♀	5100 ft.
1130	Perognathus	♀	" "
6675	Nuttall [illegible]picker	♀	" "
6676	Bell Sparrow	♂ jv.	" "
6677	" "	♂ jv.	" "
1131	Eutamias merriami	♀	" "
1132	Peromyscus	♀	" "
1133	Neotoma	♀	" "
1134	"	♀	" "
1135	"	♀	" "
6678	Lutescent Warbler	♀	"
6679	Black-throated Gray Warbler	♂ jv.	" "
6680	" " "	♂ jv.	" "
6681	" " "	♀ jv.	" "
6682	" " "	♂	" "

* all of one family; adults still feeding juvs., & two latter are in midst of post-juvenal moult!

Dixon went up to Fish Creek & back today, with following results: —

1136	Gray Squirrel ♀	6000 ft.
6683	Red-breasted Sapsucker ♂ jv.	5200 ft.
6684	Gray Flycatcher ♀ jv.	6500 ft.
6685	Olive-sided Flycatcher ♂ jv.	6000 ft.
6686	" " ♂ "	" "
6687	" " ♂.	" "
6688	Gray Flycatcher ♀ (with set 1/3, complete)	6500 "
6689	Lazuli Bunting ♀? jv.	6000 "
6690	" " ♂ jv.	5500 "
6691	Parkman Wren ♀	" "
6692	Mountain Chickadee ♀	6500 "
6093	Cabanis Woodpecker ♀	6000 "

July 11

1137	Neotoma ♀	5100 ft.
1138	" ♀	" "
1139	" ♂	" "
1140	" ♀	" "
1141	Citellus beecheyi ♂ jv.	" "
1142	mephitis ♀ 508-245-62.	" "
6694	Cassin Vireo ♀	" "

Found a Cassin Vireo's nest with 2 small young, & put up on lower bough of golden oak, near stream. Up in the brush belt have seen several Bell Sparrows (typical, dark, not the Sage, cinereus or mexicanus) yesterday & today, adult & full grown young.

Yesterday Dixon took the set of 3 fresh eggs.

and nest of Gray Flycatcher, same as I spotted on July 5. The nest with one egg found on the sixth in Fish Creek canyon had been destroyed by jays. Dixon also found a set of 3 fresh junco eggs in Fish Creek Canyon. This afternoon we ~~broke~~ camp. & moved down some 2 miles below 7-oaks, and made camp this evening opposite Ball's ranch at mouth of Foresee Creek, elevation about 4800 ft. This is almost typical fresh belt on the north side of the Santa Ana, while on the south side the lowest (north) slopes are clothed with big-cone spruce.

July 12.

1143	Vespertilio	♂	Foresee Creek. 4800 ft.
1144	"	♂	" " "
1145	"	♂	" " "
1146	Neotoma	♀	" " "
1147	"	♂	" " "
1148	"	♂	" " "
1149	"	♀	" " "
1150	"	♂	" " "

Today I went alone to the top of San Bernardino Mountain (or Peak). Left camp at 6 a.m., going up Foresee Creek past old Captain Foresee's cabin.

then striking eastward along a cattle trail through a series of meadows & flats, nearly to "Barton" (or Hathaway) Flat. Then went south up over the excessively steep ridges, culminating in a peak, marked 10666 on the U.S.G.S. Contour sheet, then west along the ridge to San Bernardino Peak proper (10,630 ft.), and finally north down to Forsee Creek and back to camp. In going up, the first belt passed through (and started in, was the brush belt, with a few big-cone spruces near mouth of Forsee Creek (that is, along lower course); and here I heard the unmistakable notes of the western flycatcher from the dense alders & spruces along the creek. Also noted in this belt:- Cal. Jay; Wren-tit; bush-tit (a pair have a nest 7 feet up in the lower pendant bough foliage of a spruce, evidently with young); Spurred Towhee; San Diego Wren; (and here near camp) several Bullock Orioles & Black Phoebes);: The next belt was the Black Oak along the series of flats, before mentioned; these oaks were intermingled with yellow and Jeffrey pines & Incense Cedar. Here were seen a few ground squirrels & many Merriam Chipmunks & 2 or 3 Gray squirrels; also Western Red-tail [illegible] squalling near where a pair of adults were seen);

Cassin Vireo; Black-headed Grosbeak; Western Tanager; Western Bluebird; Slender-billed Nuthatch; Blue-fronted Jay; Mountain Quail (brood of very small young); Mourning Dove; Red-shafted Flicker; + Cabanis Woodpecker; Next, up the mountain side from, say, 6000 ft. to 8000 ft., was a distinct belt of white pine & sugar pines (P. Lambertiana) the latter very numerous + fruiting abundantly. There were also a mixture of Jeffrey pine, and in open places brush composed of manzanita (A. patula) + buck-thorn (C. cordulatus), very low + dense towards the upper part of this zone. In this belt were: Sierra Creepers; Audubon Warblers; Olive-sided Flycatcher; Gray Flycatcher (several, but not as common as up Fish Creek); Slender-billed Nuthatch; Cassin Purple Finch; Pine Siskin; White-headed Woodpecker (but one seen); Clark's nutcracker (one heard); Green-tailed Towhee; Parkman Wren, Sierra junco (with young), and the only mammals — Eut. speciosus. The next + final belt, embracing the rest of the range above about 8000 feet, including the whole summit which are not bare as is Grayback — characterized by tamarack pine, shingle pine,

and a few limber pines, the latter in stunted form prevailing along the crest, and constituted what may possibly have been called "white-bark" pine on Grayback. This "Canadian" zone is very quiet & bird life relatively scarce. The most abundant species was the Audubon Warbler, and next in point of numbers, the rock Wren. The latter were in scattering companys, even among fallen logs in the forest, but most typically among the rock piles along the ridges; they were quiet save for their trill note at intervals, but very inquisitive & tame. It was hard to get far enough away to shoot them! They would keep approaching as fast as one would retreat, ~~spreading~~ & bowing at every change of position. Other birds of this belt were: Western Bluebird (2 prs. seen); Junco (one pair); Nutcracker (not more than 3 altogether); Pine Siskin (a small flock); Western Chipping Sparrow (several including pair & young); Townsend Solitaire (singing freely, 2 or 3 only).

Insects were rather common on summit, where 2 kinds of ~~butte~~ swallow-tails were seen, & the medium-sized checkers common on

San Bernardino Peak
10,000 ft.

a flowering dwarf buckwheat. Ch. jun. & fringillinus in proper place. Just at 10,000 feet in a steep rocky ravine in the pines there were at least 2 pairs of Canyon wrens, in full song; also a solitaire; also in the pines at the same point, I heard the "wä-wä-wä, wä"; — in slow nasal tone, of what I would swear was the red-breasted Nuthatch; but not a glimpse could I obtain of the birds. Creepers were common in the vicinity, and a few pygmy nuthatches were also heard.

1151	Eutamias Speciosus	♀	9000 ft.
1152	" "	♂	"
1153	" "	♂	"
6695	Cassin Vireo	♂	5500 ft.
6696	Rock Wren	♀ jv.	10,000 ft.
6697	" "	♀ jv.	" "
6698	" "	♀ jv.	" "
6699	" "	♂ jv.	" "
6700	" "	♀ jv.	"
6701	" "	♀ jv.	"
6702	" "	♂ jv.	" "
6703	Sierra Junco	♂	"
6704	Townsend Solitaire	♂	9000
6705	" "	♀	"
6706	Gray Flycatcher	♂	"

1154	Citellus	♀jr.	4800 ft.
6707	Pine Siskin	♂	10.000 ft.
6708	Audubon Warbler	♂	" "
6709	" "	♂	" "
6710	" "	♂	" "
6711	" "	♀	7500 ft.
6712	Green-tailed Towhee	♂	8500 ft.
6713	California Jay	♀	5000 ft.
6714	West. Chipping Sparrow	♀jr.	" "
6715	Black-throated Gray Warbler	♀im.	4800 "

July 13

1155	Perognathus	♂	4800 ft.
1156	"	♂	" "
1157	"	♂	" "
6716	Plumed Partridge	♀	" "
6717	Cassin Vireo	♂	" "
6718	" "	♂jr.	" "
6719	Ash-throated Flycatcher	♀	" "
6720	Parkman Wren	♀jr.	" "

Here around camp have seen: mourning dove, [illegible] Flycatcher, Bullock Oriole, Black Phoebe, Wren-tit, Bushtit, Yellow Warbler, song sparrow, [illegible], Spotted Towhee (1 or 2), Calif. Jay, and perhaps other Sonoran species. Also: Western Tanager, Cassin & Warbling Vireos, Lazuli Bunting, Wood Pewee, Black-throated Gray Warbler, [illegible]

Foresee Creek
4800 ft.

Nuttall Woodpecker, Parkman Wren, etc.

Mammals:— Ground Squirrel (few); Merria... Chipmunk (few); Wood rat (fairly common); Pocket mouse (trapped 4, seems to replace white-footed mice entirely; one had in left cheek-pouch 12, and in right 16 shelled wild rye grains, which are long acicular seeds, and were laid in like a bunch of tooth-picks all one way); saw one cotton-tail rabbit.

6721 Calliope Hummer ♂ 5500 ft.
1158 Merriam Chipmunk ♀ " "
1159 Gray Squirrel ♀ " "

July 14

1160 Neotoma ♀ 4800 ft
1161 " ♀ " "
1162 Perognathus ♂ " "
1163 " ♀ " "

Saw Green-backed & Lawrence Goldfinches, and Violet-green Swallows about camp this morning. Broke Camp & left at 9:30 am for Bear Valley. Climbed the grade above Clarke's Ranch and reached Bluff Lake at 3:30 P.M., where we have made a base-camp: elevation 7500 ft. by a cienega surrounded by yellow pines, white firs, willow, chinquapin, manzanita (A. patula) and buckthorn (Ceanothus)

July 15

1164	Nyctis	♂		7500 ft
6722	Sierra Hermit Thrush	♂		" "
6723	Stephens Fox Sparrow	♂		" "
6724	" " "	♀		" "
1165	Microtus	♂		" "
1166	"	♀	< 5 embs.	" "
167	Eutamias speciosus	♀		" "
1168	" "	♂		" "
1169	" "	♂		" "
1170	" "	♀		" "
6725	Dotted Canyon Wren	♀ jv.		" "
6726	Pygmy Nuthatch	♂		" "
6727	Western Chipping Sparrow	♂		" "
6728	Western Robin	♂ jv.		" "
6729	Williamson Sapsucker	♂ jv.		" "
1171	Eutamias speciosus	♀		" "
6730	Hammondi Screech Owl	♂		" "

July 16th

1172	Eutamias speciosus	♂		" "
6731	Stephens Fox Sparrow	♀		" "
6732	" " "	♀ jv.		" "
6733	" " "	♀ jv.		" "
1173	Eutamias speciosus	♂		" "
1174	" "	♀		" "
1175	" "	♀		" "
1176	" "	♂ jv.		" "

Bluff Lake 7500 ft.

6734	Parkman Wren	♀ jr.	7500 ft.
6735	Gray Flycatcher	♂	" "
6736	" "	♂	" "
6737	" "	♂	" "
6738	Allen Hummer	♀	" "
1177	Callospermophilus	♀	" "
1178	Thomomys	♀	" "
1179	"	♀	" "
1180	"	♀	" "
1181	"	♀	"
1182	"	♀	" "
1183	Microtus	♂	" "
1184	Eutamias speciosus	♀	" "
1185	Callospermophilus	♀	" "
6739	Stephens Fox Sparrow	♀ jr.	" "
6740	Gray Flycatcher	♀	" "
6741	Western Bluebird	♂	" "

Last evening I secured the best bird so far - a flammulated screech owl. Both last evening and the night before, both early morning as well as evening, we heard the peculiar "whoot, whoot", exactly as at Dry Lake. Last night it began at early dusk, by 7 o'clock; but on account of its ventriloquial quality, gave no hint of its distance. Altho far-reaching, the notes were

recall, uttered nearby, the sounding a long ways off. By stalking the point of origin was located in the top of a tall yellow pine a couple of hundred yards from camp, and presently the small bird was seen to fly across, with true owl silouette, into the top of the next tree, where it lit fully 80 feet up, on a branch. A shot with No. 7 smokeless, luckily started it down; after a few minutes lodgment, it fell to the ground — a flammulated screech owl. The notes are particularly remarkable, as being altogether different from those of the ordinary Calif. or eastern screech owl, and different from any other owl for that matter. There is just a single mellow "whoot", repeated at rather long intervals of generally equal length, something like the call of the plainsprairie in this respect. I am absolutely sure now, that the note of the species heard at Long Lake, I saw by the dim light of the camp fire.

I have also heard just once, yesterday

Bluff Lake 7500 ft.

morning, the "wä, wä, wä", which I am so sure belongs to the Red-breasted Nuthatch; but no sight of the bird yet. Nighthawks are fairly common, making their appearance at early dusk, even before sundown, but flying very high.

1186 T. hesperus ♀ " "
1187 Callospermophilus ♀ " "
1188 Eutamias speciosus ♂ " "
1189 " " ♀ " "
1190 Vespertilio ♂ " "
1191 " ♂ " "

July 17

1192 Microtus ♀ " "
6742 Western Bluebird ♂ jv. " "
1193 Microtus ♀ "
1194 " ♀ " "
6743 Williamson Sapsucker ♂ jv. " "
6744 Rock Wren ♂ "
6745 Stephens Fox Sparrow ♀ "
6746 " " " ♀ " "
1195 Eutamias [illegible] ♀ "
1196 " " ♂ "
1197 " " ♀ " "
1198 " " ♀ "
6747 Western Robin ♀ "

6748	Lutiscent Warbler	♂ jv.	750 " "
749	audubon Warbler	♀? jv.	" "
750	" "	♂	" "
751	Allen Hummer	♀	" "
1197	La sperm[illegible]dus	♂ jv.	" "
1200	"	♀ jv.	" "
1201	"	♂	" "
1202	"	♂	" "
1203	"	♀	" "
1204	"	♀	" "
1205	Thrasonnys	♀	" "
1206	"	♂	" "

July 18

1207	Sorex	♀	" "
6752	Stephens Fox Sparrow	♀ jv.	" "
6753	" " "	♀ jv.	" "
6754	" " "	♂	" "
6755	" " "	♀	" "
1208	Callosternophilus	♀	" "
1209	"	♀	" "
1210	"	♂ jv.	" "
6756	Gray Flycatcher	♂ jv.	" "
6757	" "	♂ jv.	" "
6758	[illegible]	♂	" "
6759	[illegible]	♀	" "
6760	[illegible]	♀	" "

1211	Entamias speciosum	♀	7500 ft.
1212	" "	♂ jv.	" "
1213	Microtus	♀ 4E.	"
1214	"	♀ 8E.	"
1215	"	♂	" "
6761	Sierra Junco	♂ jv.	"
6762	" "	♂ jv.	" "
1216	Thomomys	♀ jv.	" "
1217	Entamias speciosum	♂ jv.	" "
6763	Audubon Warbler	♀	"
6764	Cassin Vireo	♂	" "
1218	Entamias speciosum	♂	"
6765	Slender-billed Nuthatch	♂ im.	"

July 19

6766	Parkman Wren	♂ im.	" "
6767	Allen Hummer	♀	"
1219	Callospermophilus	♂	"
1220	"	♀ jv.	" "
1221	"	♀ jv.	"
6768	Lincoln Sparrow	♂	"
6769	Gray Flycatcher	♂	"
6770	Green-Tailed Towhee	♂	"
6771	Cabanis Woodpecker	♂	"
1222	Microtus	♂	
1223	"	♀ 4E.	
1224	Entamias speciosus	♂	

772	Stephens Fox Sparrow	♂ jv.	7300 ft.	
773	" " "	♂	"	"
774	" " "	♂	"	"
775	" " "	♂	"	"
776	" " "	♀	"	"
777	" " "	♀	"	"
1225	Junco [illegible]	♂	"	"
1226	" "	♂	"	"
1227	" "	♂ jv.	"	"
1228	" "	♀	"	"
6778	Audubon Warbler	♀ jv.		"
6779	Allen Hummer	♂ im.		"
1229	Microtus	♀	"	"
1230	Callospermophilus	♂	"	"
1231	Thomomys	♀	"	"
1232	"	♂	"	"
1233	"	♀	"	"
1234	Citellus beecheyi	♀ jv.	"	"

July 20

235	Sorex	♂		"
236	"	♂		"
237	[illegible]	♂		"
238	Gray Fox	♂	968 x 393 x 130	"
780	Gray Flycatcher	♀		"
781	"	♀ jv.		"
782	[illegible] Warbler	♂ jv.		"

Bluff Lake
7500 ft.

1239	Microtus	♂	7500 ft.
1240	"	♂	" "
6783	Allen Hummer	♀	" "
1241	Sorex	♂	"
1242	Microtus	♂ jv.	" "

The fox was caught sometime before 10:30 last night, when I was awakened by its continued loud howling & whining. He had doubtless just been caught, for the feet, two of which were held, were not lacerated. I got up, and by candle-lantern light, dispatched him. The traps, 3 in number were placed about a pile of rocks in which was partly hidden a dead chipmunk; also refuse bacon strewn about. The shrews so far, 4 in number, have all been taken at noon, or evening before dark, showing that they evidently do most of their foraging by daylight and when it is warm. The traps were set in Microtus runways in the grass of the swamp edges, and with only rolled oats as bait; tho' it is probable that the traps are giving simply because obstructing the runways. The meadow mice are nearly all of them trapped in the daytime also, — I not

in the shade either. Among the other mammals met with here are:- Gray Squirrels (notably scarce, but 2 or 3 seen;); Bats - Vespertilio & Myotis - appear in numbers at early dusk; a bat of intermediate size is also seen, but its slow flight leads me to believe it only a young vespertilio; Yellow-headed Chipmunks (Callospermophilus) are very numerous about the chinquapins, and small young are beginning to make their appearance. This species behaves much like ground squirrels, in that the run over the ground rather than up trees, in fact it is seldom one sees them higher than the top of a boulder or stump, where they will sit motionless bolt upright. They are very quiet little animals, and are rarely heard - a sharp note, or low chuckle is all are hear. But the other chipmunk (Eutamias speciosus) is quite noisy, having a variety of sharp chips & spattering series of notes, given when alarmed, or quarreling, which they seem to do habitually (not counting!). This chipmunk is a ready climber, & usually take to

Bluff Lake 7.5.09

the tallest timber, when pursued, rather than to holes in the ground or logs or rock piles, as Callosp. does. Eut. climbs rapidly either yellow pine or fir tree trunks, ascending the opposite side of the trunk from the intruder, but frequently peeping around to see what's doing. They usually go up 30 to 40 feet & take refuge on top of a horizontal branch, where they sit motionless peering down at once. It is surprising how small the juveniles of both species are able to shift for themselves. We get them in our traps not even 1/3 grown. The adults show no solicitude at all for the young. Many ground squirrels (Citellus) are reported by Dixon as having burrows out in the large pasture meadow. Gophers (Thomomys) are very numerous in the meadows, burrowing through the soaking wet sod, not minding a wetting; for Dixon catches them in steel traps so that the gophers are often found partly submerged in a runway. A few young, only one yet in evidence. This region is notable for its lack of Peromyscus & Neotoma, of any sorts.

6784	Slender-billed Nuthatch	♂ jr.	7500 ft.
1243	Microtus	♂ jr.	" "
6785	Pine Siskin	♂	" "
6786	Williamson Sapsucker	♀	" "
1244	Microtus	♂ jr.	" "
1245	"	♀ jr.	" "
6787	Blue-fronted Jay	♂	" "
1246	Eutamias speciosus	♀ jr.	" "
6788	Rufous Hummer	♀	" "
1247	Callospermophilus	♂	" "
1248	Thomomys	♀	" "
1249	"	♀ 7E.	" "
1250	"	♂	" "

July 21

6789	Chordeiles	♀ (Shot last night)	" "
6790	Gray Flycatcher	♀	" "
6791	" "	♀	" "
6792	" "	♀	" "
1253	" "	♂	" "
1251	Vesperulio	♂	" "
1252	Evotis	♀	" "
1253	"	♂ jr.	" "
6794	Townsend Solitaire	♀ jr.	" "
6795	Sierra Creeper	♂	" "
1254	Tamias quadrivittatus	♂	" "
1255	Tamias speciosus	♀	" "

Bluff Lake 7500 ft.

1256	Thomomys	♂	7500 ft.
1257	"	♂	"
1258	"	♀	"
1259	"	♀	"
1260	"	♀	"
6796	Audubon Warbler	♂ ad.	"
6797	" "	♂ juv.	"
6798	Intescent Warbler	♀ juv.	"
6799	Mountain Chickadee	♂	"
6800	Stephens Fox Sparrow	♂	"
6801	" " "	♀	"
6802	Western Tanager	♂	"
6803	Cassin Purple Finch	♂	"
6804	" " "	♀	"
1261	Callospermophilus	♂	"
6805	Western Wood Pewee	♀ juv.	"
6806	Cassin Vireo	♂	"
1262	Callospermophilus	♂ juv.	"
1263	Eutamias speciosus	♀	"
1264	" "	♀	"
1265	" "	♀	"
1266	" "	♀	"
6807	Chordeiles	♀	"
1267	Myotis	♂	"
1268	Vespertilio	♂	"
1269	Microtus	♀ juv.	"

6808	Gray Flycatcher	♀jv.	all of one brood.	7500 ft.
6809	" "	♀jv.		" "
6810	" "	♂jv.		" "
6811	" "	♂jv.		" "

July 22

1270	Microtus	♀	" "
1271	"	♂	" "
1272	"	♀ SE.	" "
1273	E. Tamias speciosus	♂	" "
1274	" "	♂	" "
6812	Audubon Warbler	♂jv.	" "
6813	Slender-billed Nuthatch	♂	" "
6814	Lincoln Sparrow	♀jv.	" "
1275	Eutamias speciosus	♀	" "
6815	Western Warbling Vireo	♀im.	" "
6816	Gray Flycatcher	♀	" "
6817	" "	♂	" "
1276	Callospermophilus	♀	" "
1277	"	♀	" "
6818	Audubon Warbler	♀jv.	" "
1278	Callospermophilus	♂jv.	" "
1279	"	♂jv.	" "
1280	[illegible]	♀	" "
1281	"	♀	" "
1282	"	♀	" "
1283	Callospermophilus	♀	" "

Bluff Lake 7500 ft.

July 23

6819	Chordeiles	♀	(Shot last night) 7500 ft.	
1284	Callospermophilus	♀	"	"
1285	"	♂		
1286	"	♀ jv.	"	
1287	"	♀ jv.	"	
6820	Sierra Hermit Thrush	♀ jv.	"	"
6821	Gray Flycatcher	♀	(Egg in oviduct)	"
6822	" "	♀		"
6823	Mountain Chickadee	♂ jv.	"	"
6824	Audubon Warbler	♀ jv.	"	"
6825	" "	♀ jv.	"	"
1288	Eutamias speciosus	♀	"	"
1289	" "	♀	"	"
1290	" "	♂	"	"
1291	" "	♀	"	
6826	Plumed Partridge	♀		"
6827	Black-chinned Hummer	♀ jv.		"
1292	Eutamias speciosus	♀	"	"
1293	" "	♂	"	"
6828	Gray Flycatcher	♂		"
6829	Audubon Warbler	♂ jv.	"	"
6830	" "	♀ jv.	"	"
6831	" "	♂ jv.	"	
1294	Microtus	♂		"
1295	Callospermophilus	♀		"
1296	"	♂ jv.		"

Three rattlesnakes secured Aug. 21st + 23rd, the warmest weather we have had up here, measured in length 3 ft. 6 in., 3 ft. 4 in., 3 ft. 2½ in. The second was in largest girth 4 in. These are all of the very dark almost black mountain type of coloration. The first contained two Eutamias speciosus, both head first, and tandemly aligned in the al. c., nearest the anal opening than the mouth. The most posteriorly located, was almost completely dissolved, hair & bones as well as flesh, have disappeared, except the head, in part, ears & teeth. All 3 snakes were very fat, masses of adipose tissue in skeins lying along the body cavity. This affluent condition is doubtless due to the great abundance of chipmunks. Dixon measured a white fir at Bluff Lake, the largest in sight. It proved to be 23 feet in circumference, 4 ft. above the ground, and 167 feet in height (by two tests, with the proportionate shadow method). I have seen but one sugar pine near here, one very large one near the east side of the meadow. This meadow occupies what was evidently once a basin, which has been filled in by deposits of alluvial sediment & leveled up by vegetation. There is yet a small tule-filled pond at the lower (west) end. At

Bluff Lake
7500 ft.

this end (west) is a fringe of Murray (Tamarack) pines, several of very large size, considering the species, but none equalling the Jeffrey & Yellow pines which prevail, outside of the white pines. Dixon caught in a No. 0 steel trap a single Peromyscus gambeli in the meadow, near a bed of the thick stalked, big leaved plant so conspicuous there. The following birds have been so far detected in this immediat vicinity, that is, within ½ mile of Bluff Lake meadow proper, 7400 ft to 7500 ft.:—

(1) Western Bluebird (common; full-grown juveniles plentiful everywhere; an adult ♂ taken of the anabelæ type, that is, with a restricted of chestnut dorsally & ventrally). (2) Western Robin (common about the meadow, just as on an eastern lawn; but few young yet in evidence, tho adults are often seen carrying bills-ful of insects up into high pines; they are quite crepuscular, like thrushes, flying about & calling when fashion until nearly dark). (3) Sierra Hermit Thrush (very sparingly represented here, and quiet; only heard singing twice, brokenly. full-grown juvenile taken). (4) Townsend Solitaire (Scarce; heard singing one near camp, and an adult & full-grown juvenile met with in a boulder-strewn

the latter secured; both quiet): (5) Wren-tit (Was very much surprised to have a pair come close about me in a willow thicket a half mile south towards the "look out"; they were quiet, & appeared to be juveniles, doubtless wandered over the short distance from the brush-belt on the Clarke's Ranch face of the mountain). (6) Mountain Chickadee (Numerous & noisy, in flocks; a snake skin stretched over a slanting willow trunk at camp to dry, was sighted by a chickadee, whose startled cries brought more and more, with such a hub-bub, that other species of birds came, including audubon warbler, gray flycatcher, Lutescent warbler, juncos, chipping sparrows, a purple finch, siskins, woodpeckers & even a hummer. An intrusion on my part, in the shape of a shot at a gray flycatcher, distracted attention from the snake skin, and the mob quickly and silently dispersed, except a few chickadees which remained about peering anxiously at the snake skin from time to time). (7) Slender-billed Nuthatch (common, adult, & full-grown young, an adult ♂ was shot in the act of producing a song or call, which I have heard several times lately but not accurately identified; it was a very rapid "whew-ew-ēē; ēē-ēē-ēē-ēē" run together quickly).

(8) Pygmy Nuthatch (few and quiet; an adult taken near camp as it came to bathe. I & Dixon have both again heard the "wă-wă-wă" of what I have an idea is the red-breasted nuthatch; but no more definite evidence yet); (9) Sierra Creeper (Common, and young out). (10) Parkman Wren (quite numerous in willow & ceanothus thickets, but quiet, only a rollicking bits of the spring song now & then heard; both adults & young seem to be gaining winter plumage very early). (11) Canyon Wren (one full-grown juvenal taken in rock-pile near camp). (12) Rock Wren (Common about the boulder heaps at the tops of the rolling hills, especially towards the top of the ridge to the southward). (13) Audubon Warbler (Numerous, large numbers of juvenals appearing, noisily teasing when fed; a half-fledged young one taken yesterday; adults & young in various interesting phases of fall moult tempt me to shoot them in numbers; the juvenal plumage is extremely brief, as I found at 7-oaks with the black-throated gray warbler. I have an idea the real juvenal plumage of many of these birds is little known, the succeeding early first winter plumage having been taken for the former. See Bird-Lore

warbler pictures!) (14) Lutescent Warbler numerous in willow thickets, only juvenals so far taken, which I believe have been bred in the lower canyons, and wandered up here since the breeding season for better forage; insects are swarming everywhere here now, a regular paradise for all insectivorous birds, which may account for the fatness of many of the fall migrants at Pasadena + elsewhere). (15) Western Warbling Vireo (only two detected in pines + willows by camp). (16) Cassin Vireo (several males singing falteringly, in pines + willows by camp; this + the last may have wandered in here from below since the nesting season). (17) Violet-green Swallows (troupes of twittering juveniles, are occasionally seen flying rapidly across country high above the tree-tops; some are seen hawking over the meadows. (18) Western Tanager (♂ in full song near camp; not common). (19) Stephens Fox Sparrow (very common, even more so than at South Fork Cienega; many full-grown young about, while the condition of the breast-skin of some of the females shot, show that probably second sets are laid; fox sparrows occur in the chaparral among the buckthorn, manzanita

Bluff Lake 7500 ft.

and chingapin, as well as about the willowy margins of the ciengas; I imagine their nests would be found in the former location). (20) Lincoln Sparrow (Two males and a juvenile are all encountered so far; early one morning a male sang loudly by camp, but kept well hidden in the willows; the song is in no way like a song sparrow's, being more to me like a parkman wren; but I can't describe it intelligably yet). (21) Sierra Junco (very common, as usual; half-fledged young, as well as full-grown, numerous about the meadow). (22) Western Chipping Sparrow (common as usual). (23) Cassin Purple Finch (feeding commonly on the meadow; no young yet that we have seen). (24) Pine Siskin (Numerous, feeding in the meadow in small groups, presumably young with parents). (25) Clarks Nutcracker (2 seen one morning, and not to heard since by; in pines; shy and scarce). (26) Blue-fronted Jay (fairly common around the camp and the cabins, inquisitive and at times noisy, as usual; often mobbed violently by Audubons especially as well as other small birds). (27) Gray Flycatcher (very numerous, for a flycatcher, more so even than in Tul. Creek

canyon, frequenting the willow copses about the ciengas as well as the dry pine woods; but very few full-fledged juveniles are about as yet, while a ♀ taken today, had an egg as yet soft shelled in oviduct, & another large yolk in ovary, so that breeding season is quite extensive. A nest with four half-grown young was found near camp on a hillside, 2 feet up in a vertical shoot of a chinquapin thicket, composition as usual; gray flycatchers are most noisy, as are wood pewees & olive-sides at daybreak and for a while after). (28) (Western Wood Pewee (fairly common; full-grown young out). (29) Olive-sided Flycatcher (several noisy pairs). (30) Black-chinned Hummingbird (One ♀ juvenile taken by Dixon today = only one seen so far). (31) Rufous Hummer (quite numerous, all so far taken being juveniles; a few males seen & heard). (32) Calliope Hummer (very few seen). (33) Nighthawk (common; heard "booming" & seen flying at all times of day). (34) Hammond's Owl (only the one taken & previously discussed. (35) Cooper Hawk (one seen). (36) Turkey Vulture (Dixon saw one over meadow, & I saw one down

Bluff Lake 7500 ft.

the road to Pine Lake). (37) Horned Owl (Heard one night in the direction of the cienega where the meadow-mice are so thick). (38) Plumed Partridge: (one brood of half-grown young with parents flushed at edge of cienega today).

July 24

1297	Thamnomys	♀	7500 ft.
1298	"	♂	" "
1299	callospermophilus	♀	" "
1300	"	♀ jv.	" "
6832	Allen Hummer	♀	" "
6833	Rufous "	♀	" "
1301	Callospermophilus	♀	" "
6834	Audubon Warbler	♂ jv.	" "
6835	" "	♂	" "
1302	Callospermophilus	♂ jv.	"
1303	"	♂	" "
6836	Parkman Wren	♀ jv.	" "
6837	Song Sparrow	♂ jv.	" "
1304	Thamnomys	♀	" "
1305	Citellus beecheyi	♀	" "
6838	Gray Flycatcher	♀ jv.	" "
6839	Western Chipping Sparrow	♂	"
6840	Stephens Fox Sparrow	♂	"
6841	" " "	♀	"

6842 Chordeiles . . ♂ 7500 ft.
6843 " ♀ " "
1306 Callospermophilus ♂ " "
1307 " ♂ jv. " "
1308 " ♂ jv. " "
1309 " ♀ " "
6844 Stephens Fox Sparrow ♀ " "
6845 White-headed Woodpecker ♀ " "

July 25

6846 Sierra Creeper ♀ jv. " "
6847 " " ♂ jv. " "
6848 Sierra Hermit Thrush ♂ jv. " "
1310 Eutamias speciosus ♀ " "

A fox carcass I threw out in the brush near camp is beginning to smell pretty loudly. A while ago a turkey buzzard made its appearance circling down? the wind nearer & nearer to camp, & it now has swooped down just the other side within a few feet. As the carcass is altogether concealed at any distance, I take this as a pretty conclusive case that buzzards are guided by smell, as well as by sight. (39) Also shot a young sparrow, full-grown juvenile in the willows at border of meadow; I also

Bluff Lake 7500 ft

heard one (ordinary call note) in large-leaved plant at extreme west end of meadow. (40) White-headed Woodpeckers are fairly common, but hard to get, as they keep so high in the pines; a ♀ adult taken Today, is fearfully smeared with pitch; a juvenile, full-grown, is a freak in that it has a white patch of feathers in the otherwise black belly region. (41) Sierra Sapsucker, just one, seen by Dixon; it alighted on a fence rail at 15 feet distance to scan itself. (42) Williamson Sapsuckers are fairly common, but so quiet as to be easily overlooked; many grills of borings adorn the bark of yellow pines & firs. (43) Cabanis woodpeckers are the commonest picidæ here about, & noisy as usual; they drum xylophone-fashion, on snags of different tones very effectively. (44) Several (red-shafted) flickers live in the neighborhood (45) an Ashy Kinglet, ♂ in full song, was noted yesterday by Dixon, in some firs. (46) Black-throated Gray Warbler, one seen, and an immature in full 1st winter plumage taken today; in this case, as well as with the Intercents. and two vireos, I think it most likely that they have wandered up from

lower altitudes since the nesting season. Hence records here now, do not necessarily mean breeding records. In other words, the fall restless season has begun among many species, to culminate shortly in true migratory movements.

6849 Stephens Fox Sparrow ♂ 7500 ft.
1311 Callospermophilus ♀ jv. " "
6850 Pine Siskin ♂ jv. " "
6851 " " ♂ " "
6852 Green-tailed Towhee ♀ jv. " "
1312 Entamias speciosus ♂ " "
1313 " " ♀ " "
6853 Black-throated Gray Warbler ♀ jv. im. " "
6854 Cassin Purple Finch ♀ ♂ (testes — o) " "
6855 Western Robin ♀ " "
6314 [illegible] ♂ " "
6856 Blue-fronted Jay ♀ jv. " "
6857 White-headed Woodpecker ♀ " "
6858 " ♀ jv. " "
6859 " ♂ jv. " "
1315 Callospermophilus ♀ " "
1316 Eutamias ♀ jv. " "
1317 " ♀ " "
1318 Eutamias speciosus ♀ " "
1319 Vespertilio ♂ " "

Bluff Lake 7500 ft.

1320	Chordeiles	♀	7500 ft.
1321	"	♀	" "
6860	Chordeiles	♂	" "
6861	"	♀	" "
6862	"	♀	" "
6863	"	♀	" "
6864	"	♀	"

July 26

1322	Microtus	♂	" "
1323	"	♂	" "
1324	"	♂	" "
1325	Thomomys	♂ BB.	" "
1326	"	♂	" "
1327	Microtus	♂	" "
1328	"	♀	" "
6865	Western Bluebird	♂	" "
6866	Gray Flycatcher	7 jr.	" "
1329	Callospermophilus	♀	" "
1330	"	♀	" "
1331	"	♀	" "
1332		♀	" "
6867	Cassin Purple Finch	♂	" "
6868	Allen	♀	" "
867	" "	♀	" "
1333	Eutamias speciosus.	♀	" "
1334	" "	♀	" "

1335	Eutamias speciosus	♀	7500	ft.
1336	" "	♀	"	"
1337	Callospermophilus	♀ jv.	"	"
1338	"	♂ jv.	"	"
1339	"	♂ jv.	"	"
1340	"	♀ jv.	"	"
1341	Vespertilio	♂	"	"
6870	Gray Flycatcher	♂	"	"
1342	Microtus	♂	"	"
1343	"	♀	"	"
1344	Thomomys	♂ jv.	"	"
1345	"	♀	"	"
1346	" "	♀ jv.	"	"
1347	"	♀	"	"
1348	Eutamias speciosus	♀	"	"
1349	Callospermophilus	♀ jv.	"	"
1350	"	♀ jv.	"	"

July 27

6871	Cassin Vireo	♂ in		
6872	" "	♂	"	"
6873	Spurred Towhee	♂ jv.	7300	ft.
6874	Stephens Fox Sparrow	♀	"	"
1351	Callospermophilus	♀	"	"
1352	"	♂		

The spurred towhee was shot from a [illegible]

Bear Lake
6700 ft.

on the road to Bear Lake. Junco was seen the specimen is in the post-juvenal molt, and had doubtless strayed over from the Hudsonian belt on the south slope since the nesting season. Three more Pezomyscus gambeli, not saved, were trapped last night in a single window trap at Bear Lake. Found a junco's nest with one fresh egg; old bird on.

Broke camp at noon today and came down to Bear Lake, pitching camp tonight on the south-east shore of the lake, on a timbered promontory within a hundred yards of the water. We are about a mile north of Connor's store. The trees are all Jeffrey pine, with a very few western junipers, and a belt of small Artemisia tridentata sage in the open level places. The lake west of here to the dam is open water, while from this point to the east end is practically a marsh, there being very little open water.

1353	Eutamias speciosus	♀	6700 ft.
1354	"	" ♂	"
1355	"	" ♀	"

July 28

1350	E. t. inaequalis	♂	"
6875	Killdeer	♂ juv.	"
6876	American Coot	♂ ad.	"
6877	"	" ♀ juv.	"

6878	American Eared Grebe	♀ jv.
6879	" " "	♀ jv.
6880	" " "	♀ jv.
6881	" "	♂ jv.
6882	" "	♂ jv.
6883	" " "	♂
6884	Sterna	♀
6885	"	♂
6886	American Eared Grebe	♂
6887	" " "	♀
6888	" " "	♀
6889	American Coot	♂ jv.
6890	Wilson Phalarope	♀
6891	" "	♀
6892	"	♂
6893	"	♂
6894	" "	♂
6895	Western Robin	♂ jv.

July 29

6896	Black-necked Stilt	♀ jv.
6897	American Coot	♂ jv.
6898	" "	♀ jv.
6899	"	♀ jv.
6900	"	♀ jv.
6901	"	♂ jv.
6902	"	♀ jv.

Bear Lake
6700 feet

6903 Spotted Sandpiper ♀
6904 Western Willet ♂
6905 " " ♀
6906 " " ♀
6907 American Eared Grebe ♀
135½ Eutamias speciosus ♀
1358 " " ♂
6908 Western Tanager ♂
6909 Audubon Warbler ♀ jv.
6910 Western Chipping Sparrow ♀ im.
6911 " " " ♂ im.

July 30

1359 Peromyscus gambeli ♀
6912 Cassin Purple Finch ♂ jv.
6913 American Coot ♀ jv.
1360 Thomomys ♀

To us, the waterbirds have formed the most attractive feature of Bear Lake. The eastern half of the Lake is a marsh, a mile or so wide, and 3 or more miles long. The water here varies from a few inches to at least 6 feet in depth, and countless more along the old channel, which by the way marks the only open water, that is free of tule to impede rowing. Except the narrow channel, the lake (this part)

is filled with rankly growing vegetation: a species of Chara on the bottom & weed, reaching the surface; a net like fibrous plant reaching the surface but not appearing above it; a floating leafy plant with spikes of pink flowers 4 to 6 inches above the surface growing so extensively that the lake looks reddish in patches clear to the east end; a kind of tule (Scirpus), growing but a foot or two above the surface and not densely in the shallower places near shore; and felts of green algae along the muddy margin. I have seen no fish, but snails fairly swarm, while small frogs, tadpoles, & insects are very abundant. These, together with the plant life, doubtless afford an adequate food supply for the aquatic bird-life. Of this the Coot, or mudhen, is the most abundant and conspicuous. The varied assortment of noises, toots, grunts & cries, greets one everywhere. The nests are all in the Tules, and eggs found are mostly on the point of hatching. I can not tell 10 eggs, two others 9, and another 8. The nests are pretty floating & partly supported by the dead over Tules which form the foundation. The structure is rather neat in appearance consisting mostly of green tules pulled and

Bear Lake
6700 ft.

a saucer-shaped hummock 6 inches above the level of the water. In each case a cleared trail or approach leads away from the nest proper, on one side. The curious-looking young jump into the water as soon as hatched, and are able to swim vigorously at once, tho' not diving successfully until older. A nest near camp has been hatching eggs for three days, & 2 of the original 9 eggs are yet to report. Here we have watched, and yesterday afternoon, for instance, a couple of eggs were pipped only, at 1 P.M.; at 4 P.M., two youngsters were out, & took to the water at once, one getting away out of sight into the tules, while we were poking after the other. In spite of the apparently conspicuous orange & red bill & head, the youngsters are very easily overlooked as they lie flat on the surface of the water among the reddish & green plant leaves. The young, / another brood nearby are of different sizes, owing doubtless to the difference in ages. These are feeding actively with their parents among the pink flowered plants; at night they come in near shore & rest

huddled together on their old nest.

The American Eared Grebes are fairly numerous out in the middle parts of the marsh, not so much in the tules. Young of smallest size up to half-grown are in groups with their parents, diving readily & for long distances at the least alarm. And what is most exciting of interest is the way the young, one or even two at a time are carried about on the backs of their parents! Day before yesterday, I shot 4 adults, & with each was secured the youngster which was enjoying a free ride. And they seem to dive, holding on, too; for they come up together in the same relative positions. The young, however, even the very smallest downy fellows, dive independently with ease. The old birds have a repertoire of shrill three-syllabled cries, like "cut-it-out", and other cackle-like notes; while the young have a loud chicken-like peep, or maybe more like a turkey. In spite of the comparative abundance of young, & the fact that one of the ♀♀ procured contained a full, fresh egg, we have so far failed altogether to locate nests.

Of ducks, we have seen well enough to

{ Bear Lake
6700 ft.

identify with fair certainty: Cinnamon Teal (several pairs, and a brood of nearly grown young, presumably of this species); Ruddy Duck (several ♂♂, so conspicuously marked as to be readily distinguishable at a long distance); Redhead? (a large flock of nearly full-grown young closely approached); Mallard (Dixon has seen a pair twice near camp). Of the waders, we have identified: Killdeer (notes heard often, and a flock of five seen near camp; a full-grown juvenile taken evidently reared here); Spotted Sandpiper (a pair seen, and another adult ♀ taken, ova large; the latter taken on a mud-spit; no further evidence of breeding here); Western Willet (several seen flying overhead, & 3 secured from a band of 4, feeding in shallow water; very noisy); Black-necked Stilt (a large flock, fully 25, seen; also a pair of adults with 2 ¾-grown young, one of which is preserved, evidently reared near here); Wilson Phalarope (Several flocks, 4 to perhaps 20, among tules, swimming lightly, as with the Red & Northern, and taking flight with faint "peet peet"s; some of the birds are small & unquestionably ♀♀, & I think very probably raised here; some in chestnut or bright adult plumage seen.

Several Terns (Forster, I think) course back & forth over the marsh; two adults seemed, which may have nested here. Also one Black Tern (Hydrochelidon surinamensis), seen often, usually in the wake of the others, but so far keeping out of gun-shot range. Heard a Belted Kingfisher's familiar notes, down towards the open water. All of the above notes refer to the eastern or shallow half of Bear Lake. The other half, towards the dam, we have yet to explore. Of land-birds, we have so far noted the following:- Western Robin (rather common, feeding along the muddy margin of the lake); Western Bluebird (common); Mountain Chickadee (few); Pygmy Nuthatch (fairly common); Slender-billed Nuthatch (common; both species come into the trees above our camp, the latter very fearlessly inspecting our doings); Audubon Warbler (common); Violet-green Swallow (abundant); Cliff Swallow (a few immatures seen over the lake yesterday); Nighthawk (appear every evening, in varying numbers, but fly high); Western Tanager (several adults); Pine Siskin (common); Western Chipping Sparrow (large scattering flocks — the sage — no Brewer detected; commonest bird everywhere in the woods & pastures); Cassin Purple Finch (common); Mourning Dove (considerable

Bear Lake
: 700 ft.

numbers flushed in the pastures running up the valleys from the lake shore); Brewer Blackbird (large flocks feeding along the margin of the marsh & in the pastures); Black Phoebe (several); Western Wood Pewee (common); Kingbird (species not determined, 2 or 3 about lake; the one I saw impressed me as being the Cassin Kingbird, but not sure); Horned Owl (heard every night); Turkey Vulture (several); Sparrow Hawk (common; a family in pines near camp; they are feeding on insects along shore); Cabanis Woodpecker (several); Red-shafted Flicker (few). The majority of nearly all the above birds are now immatures & juvenals. Several Ravens are often seen flying about warily with sundry croaks. One Black-crowned Night Heron seen, & "squak" heard at night. Also one or more Great Blue Herons noted, flying up & down the marsh.

6914 Sterna ♂
6915 Anas cyanoptera ♂
6916 Horned Owl ♂
6917 Nighthawk ♂

The horned owl lit onto a pine ranch at late dusk within range of the campfire; its stomach contained 3 jerusalem cricketo + 2 feather

July 31

6918 Calliope Hummer ♀ jv.
6919 Gray Flycatcher ♀ im.
6920 Violet-green Swallow ♂ jv.
6921 Sterna ♀
6922 Green-tailed Towhee ♂ im
6923 " " ♀ im.
6924 Western Robin ♂
6925 " " ♀ jv.
6926 Western Bluebird ♂
6927 Sierra Sapsucker ♂
6928 " " ♂ jv.
1361 Eutamias speciosus ♂
6929 Black-throated Gray Warbler ♂ im.
6930 Pileolated Warbler ♀ im.
6931 Olive-sided Flycatcher ♂
6932 Audubon Warbler ♀ im.
6933 Pygmy Nuthatch ♂ jv.
6934 " " ♂ jv.

This forenoon we went down over the west half of the lake to the dam. This is a granite-and-masonry wall semicircular, bowing up the valley, some five feet thick at the top, ending [illegible] a narrow deep abruptly steepening gorge which constricts the lower end of Bear Valley. The west part of the lake is clear open water, a

Bear Lake
6700 feet

very few tules along the borders, which are thickly studded with stumps of trees, razed when the reservoir was projected. We saw no water birds whatever, except three Spotted Sand pipers, which kept flying along the shoreline, teetering now & then on the sand or rocks, to take flight on little provocation, with, tinkling "peet-weets". The north shore towards the west end we found teeming with land-birds. Many Murray pines help to form the forest even to the water's edge, while firs & cedars (but few of the latter in wet ravines) extend up the hillsides. Yet yellow & jeffrey pines prevail. A belt of Black Oak occupies a zone a few hundred feet up the mountains on both sides of the lake. Down one small ravine a small stream flows & empties into the lake. Along this we met with a family of Sierra Sapsuckers, some Calliope Hummers (a full-grown juvenile Taken); Black-throated Gray, Audubon, & Pileolated Warblers (all three mostly immature in nearly or quite full 1st winter plumage & not necessarily reared in that immediate vicinity); large concourses

of young violet-green swallows congregated into the bare branches of dead pines; A single Western Nuthatcher in a Murray Pine, doubtless also a wanderer; parkman Wren; Gray Flycatcher (one full-grown juv.); Blue-fronted Jay, Red-shafted Flicker, Western Tanager, Black Phoebe, Olive-sided Flycatcher, Western Chipping Sparrow & Sierra Junco & Western Bluebird (large numbers of these three species feeding along the shore where insects are swarming); Pygmy & slender-billed Nuthatches; Sierra Creeper; Western Robin (a bob-tailed youngster seemed, a very pale & with spotting sparse). Two families of Plumed Quail were seen among willows along shore. A Red-tailed Hawk, mobbed by a sparrowhawk flew across the lake as we rowed out from camp.

August 1

1362 Peromyscus gambeli ♀
1363 " " ♂
1364 Eutamias speciosus ♂
1365 [illegible] ♂
6935 American Coot ♂ jr.
6936 " " ♀ jr.
6937 American Eared Grebe ♂

Bear Lake
6700 feet

6938 American Eared Grebe ♀ (Iris orange)
6939 " " " ♂
6940 " " " ♀
6941 " " " ♀ jv.
6942 " " " ♂ jv.
6943 " " " ♂ jv.
6944 " " " ♂ jv.
6945 American Coot ♂ jv.
6946 " " ♀ jv.
6947 " " ♀ jv. [lemon yellow)
6948 Brewer Blackbird ♂ im. (Iris white, ring dusky)
1366 Thomomys ♀
1367 Myotis ♀

Aug. 2

1368 Peromyscus gambeli ♂
1369 " " ♀ 4E.
6949 American Coot ♂ (Iris burnt umber)
6950 " " ♀ jv.

Of a nest of 9 coot eggs near camp, two had hatched on the 28th of July, and the last one hatched Today. Saw a Belted Kingfisher fly past camp east this morning. Also a Great Blue Heron. This forenoon went over the marsh to the extreme east end of the lake. Found several grebes' nests, located the pink-flowered water plant, which

grow in vast beds. The nests were masses of wet & rotting tules & water plant stems, accumulated until the top was barely above the water, with a rim a little higher, perhaps 2 inches above the water's surface, leaving a saucer-shaped depression. These were extremely inconspicuous, and altho we were keenly looking out for nests, our skiff ran over the first one. Four nests were in one bunch, one old one, one with egg shells, from which young had evidently left this year, and the other two contained 4 eggs each. These last two were but about 10 feet apart. Another isolated nest was found similar to the others, but with only two eggs. The eggs were nearly completely covered by strands of rotting vegetation evidently purposely placed there by the birds to afford concealment, as well as perhaps warmth. The parent birds were shy, & kept far beyond gun shot range. On the north side of the east end of the lake are many western junipers, with tanagers and bluebirds feeding on the berries. Great quantities of sage also grow. The flats to the south of the lake

Bear Lake
6700 ft.

Arkansas Kingbirds were seen & one taken; this is doubtless the only species we have seen. Saw also about the junipers & pines, many black-throated Gray and Audubon Warblers, Sparrow Hawks, one Western Red-Tail, one juvenile Ash-throated Flycatcher (full-grown), a few robins, many chipping sparrows, etc. We estimate that there are about 100 pairs of adult grebes on the lake, and about 75 pairs of coots.

1370 Thomomys ♂
6951 Arkansas Kingbird ♂
6952 Ash-throated Flycatcher ♀ jv.
6953 Western Tanager ♂ im.
6954 American Coot ♀
6955 American Eared Grebe ♀
6956 " " " ♂ jv.

A family of 4 or 5 Western Martins appeared near camp this afternoon, circling about and alighting upon the bare branches of a dead pine, with the usual full warbling notes. Also several immature Bullock Orioles have been around in the pines the last two days. Cliff Swallows, mostly birds-of-the-year were common over the marsh

this morning. Took a set of 10 coot eggs yesterday and a set of eleven today; in both cases some of the eggs were nearly fresh, in one instance quite so, while in others of the same set incubation was very far advanced; incubation doubtless begins with the first egg, or first few, laid. The same was true of the two sets of 4 eggs of the grebe blown this afternoon. A few Linnets have been noted among the grain & about the pastures on the south side of the lake. A Horned Owl appeared last night again, but was shy.

Aug. 3

1371 Peromyscus gambeli ♂
1372 " " ♀
1373 Myotis ♀ (shot last night)
6957 Pinyon Jay ♂
6958 " " ♂ jr.
6959 Brewer Blackbird ♂ jr.

Just as we were leaving camp a flock of 4 or 5 Pinyon Jays appeared, calling loudly, and very curious. On our way east past Pine Lake through Bear Valley, met with several flocks of Horned Larks mostly females. Also a flock of fully 50 pinyon jays at

Dobbs
7000 ft.

the east end of Bear Valley; also a pair of Western Red-tail Hawks & lots of Sparrow Hawks. Took in, on the way to Dobbs: —

6960 Green-tailed Towhee ♀ imm (Baldwin Lake)
1374 Callospermophilus ♂ (Bear Valley)
1375 " ♂ " "
1376 " ♂ " "
6961 Rock Wren ♀ jv. (Baldwin Lake)
6962 Mountain Quail ♀ jv. " "
6963 " " ♀ " "
6964 Pinyon Jay ♂ jv. (Bear Valley)
6965 " " ♀ jv. " "

Aug. 4

6966 Brewer Sparrow ♀ im.
6967 Mountain Chickadee ♂ im.
6968 " " ♂ im.
6969 Rock Wren ♀ jv.
6970 Lawrence Goldfinch ♂
6971 Say Phoebe ♀ im.
6972 House Finch ♂
6973 Pine Siskin ♀
6977 Brewer Sparrow ♀ im.
6975 " " ♂ im.
6976 " " ♂ im.
6977 " " ♂ im.
6978 " " ♀ im.

6979 Brewer Sparrow ♀ im.
6980 " " ♂ im.
6981 " " ♀ im.
6982 " " ♀ im.
6983 " " ♂ im.
6984 " " ♂ im.

Aug. 5

6985 Black-throated Gray Warbler ♂ im.
6986 Western Bluebird ♀ jv.
1377 Jack Rabbit ♀
6987 Mountain Bluebird ♀ jv.
6988 " " ♂
6989 Brewer Sparrow ♀ im.

There is a wonderful difference formally between the vicinity of Bottle Gold Mt. & east end of Baldwin Lake, and the country from Bear Valley south & west. Here the hills are covered largely with Pinyon, juniper, silk-tassel bush, & sage, while the low flats & hollows are almost entirely sage-covered except for the alkali mud flats of Baldwin Lake, which is now dried up all but a few acres of shallow brine. It is noticeably drier here, and hotter, too, but on account of the dryness the heat is not oppressive. The glare is more intense however, and the landscape is [illegible]

Doble
7000 feet

hued more sage-colored. Hence such birds as sage & Brewer Sparrows are more harmonious in their tones of coloration. I forgot to mention the mammals back at Bear Lake. We found only Peromyscus gambeli around in the sage near shore; and took one ♂ Mephitis: that was all the traps produced. The two chipmunks (Callospermophilus and E. speciosus) were common there the woods & down to the water's edge in places. Ground Squirrels (Citellus) were numerous in the pastures. At night bats appeared in numbers along the marsh, and two species of Myotis were shot. Here, around Doble, Eutamias merriami, of the pinyon belt, is the only chipmunk; except this morning I found a colony of Ammospermophilus leucurus in the sage clumps between here and Baldwin Lake about a mile due south of here, and an adult ♂ and a young one were shot. There are signs of small rodents among the sage, but so far we have taken only Peromyscus gambeli, or a species related to it. Jack Rabbits of the large pale (richardsoni?) type are fairly common. A few ground squirrels are noticeable. Bats

are heard at night — a loud squeak different from anything previously heard. Wood Rats nests, accumulations of small dimensions are common in the Pinyon belt; they are the intermedia type of Neotoma, I think.

6990 Brewer Sparrow ♀ im.
6991 " " ♂ im.
6992 " " ♂ im.
6993 " " ♂ im.
6994 " " ♀ im.
6995 " " ♂ im.
6996 " " ♀ im.
6997 " " ♀ im.

1378 Eutamias merriami ♀
1379 E. [illegible] ♀
1380 Neo[illegible] ♂
1381 " ♂

6998 Pinyon Jay ♂
6999 " " ♀ im.
7000 " " ♂ jv.
7001 " " ♂ im.
7002 " " ♀ jv.
7003 " " ♂ jv.
7004 " " ♀
7005 " " ♀ jv.
7006 " " ♀ jv.

Doble
7000 feet

1382 Ammospermophilus ♀
1383 " ♀ jv.

August 6

7007 Poor will ♀ jv. (Shot last night
1384 Ammospermophilus ♀
1385 " ♀
1386 Neotoma ♀
1387 " ♀
7008 Mountain Quail ♀ jv.
7009 Mourning Dove ♂ jv.
7010 " " ♂
7011 Brewer Sparrow ♂ im.
7012 " " ♀ im.
7013 Western Lark Sparrow ♀ jv.
7014 Say Phoebe ♂
7015 California Jay ♀ im.
7016 Pinyon Jay ♂
7017 " " ♀ jv.
7018 " ♀
7019 " " ♂
7020 Horned Lark ♂
7021 " " ♀
7022 " " ♂
7023 " " ♀
1388 Jack rabbit ♂ 543 - 97 - 19
7024 Brewer Sparrow ♂ im.

7025 Poorwill ♂ (Baldwin Lake - 6700 ft.)

August 7.

7026 Mountain Quail ♂ jv.
7027 California Sage Sparrow ♀ jv.
1389 Peromyscus Gambelii. ♂
1390 " " ♂
1391 " " ♀
1392 Thomomys ♂
7028 Traill Flycatcher ♂
7029 Black-throated Gray Warbler ♂ im.
7030 Brewer Sparrow ♂ im.
7031 House Finch ♂ im.
7032 Pinyon Jay ♂
1393. Thomomys ♀
1394 Citellus beecheyi. ♀
7033 Brewer Sparrow ♂ im.

August 8

7034 Mourning Dove ♂ jv.
7035 Cooper ~~Cooper~~ Hawk ♂
7036 Horned Lark ♀
7037 " " ♂
7038 Mourning Dove ♀ jv.
7039 Parkman Wren ♂ im.
7040 Mountain Bluebird ♀ jv.
7041 " " ♀
7042 " " ♂

Doble
7000 feet

7043	Black-throated Sparrow	♀ jv.
7044	Brewer Sparrow	♂ im.
7045	" "	♂ im.
7046	" "	♂ im.
7047	" "	♀ im.
7048	" "	♂ im.
7049	" "	♀ im.
7050	" "	♀ im.
7051	" "	♂ im.
7052	" "	♂ im.
7053	" "	♀ im.
7054	" "	♂ im.

By far the most numerous bird in the vicinity is the Brewer Sparrow. They are everywhere in the sage & pinyons from the flat around Baldwin Lake well up the sides of Gold mountain. They go in scattered companies of 4 or 5 to a dozen. About the springs they are constantly arriving in numbers, but are everywhere quiet except for their faint "peet". As shown by the list of specimens the great majority are "birds of the year." Perhaps next in the matter of numbers is the rock wren, singly & in families on rocky hillsides out on the sage flat and especially about buildings. The most noisy & conspicuous

bird of the region, as well as about the most characteristic is the pinyon jay. They are met with in large but widely-scattered flocks of upwards of fifty. They are remarkable for their indifference to a person's presence, and unless on the ground, pay little attention, even if shooting is going on, & comrades falling. I have shot most of the pinyon jays with the "axe." from junipers, where they feed, come to preen themselves, after visiting springs. They may be absolutely quiet, or at times quite noisy with a concert of musical, mewing, calls somewhat like some of the notes of the California Jay. While usually feeding in the pinyon trees, the pinyon jays often scatter out over the sage flats, working over the ground like blackbirds, which they resemble very much in flight & behavior. We have seen a very few California jays in the pinyon trees on the mountain side. Mourning Doves are numerous, visiting the watering places on the slope range covers of Mountain quail. The young were fully 2/3 grown.

~~Doble~~
7000 feet

Two Cooper Hawks, one in pursuit of the other flew into a juniper near me this morning, & one was secured. A few Turkey Vultures have been seen; while Sparrow Hawks are very common down around the margins of Baldwin Lake. Lawrence Goldfinches are fairly common, adults & young. A spring at the east base of gold Mt. is visited by a good many transition species from the Jeffrey pine tracts near the summit. and down ravines & the north side, nearly to the base (or valley level). Among these temporary visitors, I have noted Parkman Wren, Green-tailed Towhee, Pygmy Nuthatch, Western Tanager, Black-throated Gray Warbler (maybe migration), and Mountain Chickadee (also fairly common everywhere in the junipers & pinyons). Other birds, noted hereabouts, are as follows: Black-throated Sparrow (a full-grown juvenile shot as it alighted on a juniper at a spring below town); Sage Sparrow (present, but only in small numbers, and excessively shy; one taken shows it to belong to the "canescens" race);

House Finch (common and typical of the region); Black Phoebe (2 seen at Baldwin Lake); Say Phoebe (fairly common & typical of the region; full-grown juveniles taken); Traill Flycatcher (one taken and another seen in pinyons, surely migrants, just as they occur at Pasadena at this season); Cliff Swallow (few about, & several nests on the mill building at the Gold Mountain mine); Spurred Towhee (2 or 3 juveniles seen in Pinyons on hillside); Pine Siskin (one taken at spring evidently temporary caller from higher zone); Horned Owl (Heard at night from rocky mt. side); Mountain Bluebird (moulting adults & full grown juvenals fairly common on the sage flats & meadows about the lake; the adults have their old tails worn off to a stump, evidently from incubatory duties in close quarters); Western Bluebird (a few seen about pinyons & at least [illegible] pinyon nests, adults & juveniles); Horned Lark (flocks of [illegible] adult and young often feeding on the sage flats from here to Baldwin Lake); Poorwill (heard & taken along the roads about

Dobbs
7000 feet

the mine buildings on the side of Gold Mt.); Nighthawk (seen & characteristic "pe-ark" heard at Baldwin Lake and here in the evenings); Junco (one visitor at spring at base of mt.); Western Lark Sparrow (one juvenal secured, the only one of the species seen); Red-shafted Flicker (one or two seen, the only woodpecker noted anywhere around here); a large wader & a small wader seen at Baldwin Lake, but the water is nearly dried up, leaving such a broad mud margin that the birds cannot be approached.

August 9

7055	Horned Lark	♀
1395	Neotoma	♂
7056	California Sage Sparrow	♀ jv.
1396	Dipodomys merriami	♀
7057	Western Bluebird	♀ jv.
7058	" "	♂ jv.
1397	Peromyscus gambeli	♂
7059	Mountain Quail	♂ jv.
7060	Pinyon Jay	♀ im.
7061	" "	♀ im.

Came down to Cushenbury Springs, elev.

afternoon, 1:30 to 4:00 PM, stopping for birds at a spring near Cactus Flat - 6000 ft.

7062 Wren-tit ♀ im. " " " "

7063 Black-chinned Sparrow ♂ im. " " " "

7064 " " ♂ im. " " " "

7065 " " ♀ " " " "

(No "windows" in skull, + yet no black chin!)

1398 Cottontail Rabbit ♂ (Cushenbury Sps. - Aug. 10)

7066 West. Chipping Sparrow ♂ jv. Cactus Flat - 6000 ft.

7067 Black-throated Sparrow ♀ jv. " " " "

7068 " " ♀ jv. " " " "

7069 " " ♀ jv. " " " "

7070 " " ♂ im. " " " "

7071 " " ♀ " " " "

7072 House Finch ♀ " " " "

7073 Brewer Sparrow ♀ im. " " " "

7074 " " ♂ im. " " " "

7075 " " ♂ im. " " " "

7076 " " ♂ im. " " " "

7077 " " ♂ im. " " " "

7078 " " ♂ im. " " " "

7079 " " ♀ im. " " " "

7080 " " ♀ im. " " " "

7081 " " ♂ im " " " "

7082 " " ♂ im. " " " "

7083 " " ♂ ? im. " " " "

Cushenbury Springs
4000 feet

7084 Brewer Sparrow ♂ im. Cactus Flat – 6000 ft.
7085 " " ♂ im. " " " "

Cushenbury Springs:—

7086 Texas Nighthawk ♂

August 10

1399 Ammospermophilus ♀
7087 Black-headed Grosbeak ♀ jv.
7088 Texas Woodpecker ♂
7089 Mountain Quail ♀ jv.
1400 Ammospermophilus ♂
7090 Mountain Quail ♂ jv.
7091 " " ♀ jv.

Cushenbury Springs is on the upper convergence of an alluvial fan which leads out at the mouth of a canyon cutting down steeply from the high mountain range immediately to the south. There are foothills on either side while to the north down some two miles lies a broad desert plain, marked with dry yellow Lake-beds and hemmed in by barren rocky desert ranges on the horizon. We are a 1000 feet or more below the pinyon belt and the gently sloping fans as well as the adjacent foothills, are scatteringly covered with various desert plants, such as Tree Yuccas & two other species of yucca, three kinds

of cactus, creasote bush, and many sorts of
woody sages. Near the springs are a few
mesquite bushes, & at the springs themselves
is a bright green oasis of cottonwoods of
dense foliage, some sort of willow, cattilejas,
tall weeds & grass. About this well-
watered oasis, birds come to drink in
large numbers. Several large coveys
of mountain Quail, & many mourning doves
afford game. Other species seen are
as follows, many doubtless migrants:-
Green Heron (one flew about the pond this
morning); House Finch (very numerous & old
nests seen in the yuccas); Black-throated
Sparrow (by all odds, the most numerous
bird, much as the Brewer was about Dobe;
adults & immatures with all or partially
black throat, & white-throated juveniles
in scattering companies, much as they
were at Palm Springs, Christmas 1903);
Cliff Swallow (large numbers over pasture
& in evening); Texas Nighthawk (several
at dusk; one shot contained an almost
& unusual gray & tiny pink testes); Shrike
(several); Arkansas Kingbird (1);
Ash-throated Flycatcher (several);

Cushenbury Springs
4000 feet

Roadrunner (2 seen, one coming to drink, & heard to utter grunting notes like the one at home); Calliope Hummer (?) adult ♂ & young, full grown, seen; also other species of hummers not identified); Traill Fly catcher (several in trees near about the spring); Western Flycatcher (one in cottonwoods by camp early this morning). Baird Woodpecker (one shot from tree-yucca, & another heard among cottonwoods); also orioles & some sort in cottonwoods. Pale copper colored rattlesnakes seem to be common; two obtained measure 35 inches & 39 inches in length. They seem to be most active morning & evening. Mammals so far haven't shown up well. Cottontails & antelope chipmunks are common; so are small & medium-sized bats in the evening.

1401 Pipistrellus ♂
1402 " ♀

August 11

7092 Black-chinned Hummer ♀
7093 Allen Hummer ♀
1403 Perognathus ♀ jr.
7094 Spurred Towhee ♀ jr.
7095 Lazuli Bunting ♂ im.
1404 Onychomys torridus ♂

7096	Warbling Vireo	♂
7097	Green-backed Goldfinch	♀ im.
7098	Lecterus	♀ jv.
7099	"	♂ im.
7100	"	♂ im.
1405	Peromyscus	♂ jv.
1406	nectoma	♂
1407	Ammospermophilus	♀
7101	Parkman Wren	♂ im.
7102	Yellow Warbler	♀ im.
7103	Western Kingbird	♀
1408	Thomomys	♂
7104	Rock Wren	♂ im.
7105	"	♂ im.
7106	Black-throated Sparrow	♀ jv.
7107	" "	♀ im.
7108	" "	♂ jv.
7109	" "	♀ jv.
7110	" "	♀ jv.
7111	" "	♀ jv.
1409	[illegible]	♂
1410	" " jv.	♀
7112	Black-throated Sparrow	♂ im.
7113	" "	♀ im.
7114	" "	♀
1411	[illegible]	♂

Cushenbury Springs
4000 feet

This morning went due west across the desert and a series of ravines to a butte with abrupt sides; then down to Box Spring and back up the road to Cushenbury. Found life of any sort remarkably scarce, except immediately about the springs. Saw one jack Rabbit, and a couple of cottontails, one of the latter fully a mile from water. Saw but one or two antelope chipmunks, and these were extremely wary; also just a glimpse of what I took to be a little brown spermophile, possibly mohavensis. Saw a pair of Cooper Hawks near the cottonwoods, and a single sparrowhawk out near the bluff. Rock wrens, linnets, doves, & black-throated sparrows were the only other birds met with away from the springs. All of these were fairly common, for the desert. Found a dove's nest with one egg & a newly hatched squab, on the ground, between & partially shaded by two small bushes not over a foot high. The distracted parent bumbled from the nest as I brushed past. The nest was a very scanty collection of fine round weed-stems. Saw a very few lizards, Sceloporus magister, on rocks, not on the grass, as at Fairmont.

with peculiar call notes
A pair of orioles, I took to be miniature
parsonum were about Box Spring, and when
alarmed took to the tree yuccas; one was taken.
Last night's trapping showed up the presence of
a Peromyscus, Perognathus, & Onychomys, all
taken among bushes on gravelly ground. Signs
of Kangaroo rats are not evident, tho they may
be here in small numbers. Gopher workings
are extremely scarce; one young one taken in
bean patch of garden. Last night's shooting
showed the small bat here to be Pipistrellus;
they are numerous, especially over a little
pond here under the trees, dipping down to
the surface apparently to drink. To-night
I shot a Vespertilio & saw another. We see
yet another medium-sized species. Today
I flushed a poorwill from among rocks
out on the desert, & it is to be heard in
the evening. Hummers shot are Black-
chinned (several also seen), and Allen [presumably
possibly R. foxi]. Dixon saw a pair of
Cactus Wrens about true yuccas near the pasture.
Also saw Lencabortes; Black Phoebe, a pair of
Brewer Sparrows; several Green-backed Goldfinches;
one Red-shafted Flicker; & 2 or 3 Black-headed
Grosbeaks. Almost all birds taken are birds of the year,
and very fat.

Cushenbury Springs
4000 feet

August 12

1412 Perognathus ♀ jv.
1413 Dipodomys merriami ♂
1414 Onychomys ♀
7115 Costa Hummer ♀ jv.
1415 Neotoma ♂
7116 ~~Lesser~~ West. Solitary Sandpiper Yellow legs ♀
7117 Traill Flycatcher ♂
7118 Sage Sparrow ♀ im.
7119 Yellow Warbler ♀ im.
7120 " " ♂
7121 Black-throated Sparrow ♀ jv.
7122 " " ♀ jv.
7123 Western Wood Pewee ♀ jv.
7124 Western Flycatcher ♀ im.
7125 Green-winged Teal ♀
1416 Ammospermophilus ♂
7126 Mockingbird ♀ jv.
7127 Texas Woodpecker ♀ im.
1417 Pipistrellus ♂
1418 " ♂
1419 " ♀
7128 Western Savanna Sparrow ♀ im.
7129 Traill Flycatcher ♀
7130 American Long-eared Owl ♂
1420 Ammospermophilus ♀

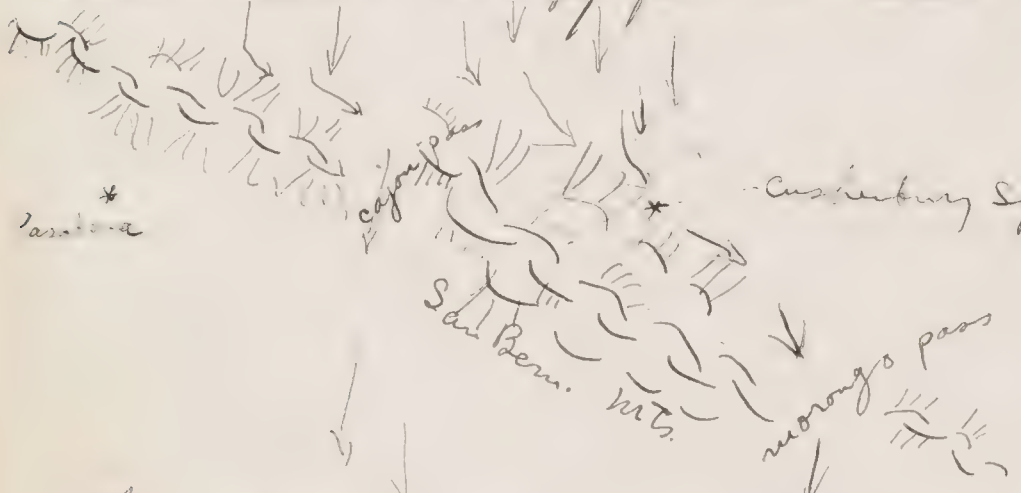
August 13

7131 Costa Hummer ♂.
1421 Peromyscus ♂
7132 San Diego Wren ♀ im.
1422 Perognathus ♂
1423 " ♀
7133 Tolmie Warbler ♂ im.
7134 Traill Flycatcher ♂
1424 Neotoma ♀
1425 " ♀

Among a company of swallows flying about over the meadow this forenoon, I recognized 2 immature Barn, at least half a dozen Bank, and many immature cliff swallows. I saw the barn swallows also yesterday and the day before. A point of interest is that among all these apparent first-fall migrants, all those taken are birds of the year (with thin patches in skulls). Still the van-guard may be held by adults, which are dryest or which have gone on past without stopping. This oasis, attracting, as it does, wayfarers from a broad highway, like an island in the sea, would be a fine tag ground for observation of fall migration; but not of the spring movements, because of the NW x SE trend of the mountain

Cushenbury Springs
4000 feet

range, which obviously shuts off its north side from congestion of migrants in the spring, & the south slope of the mountain wall in the fall. This is borne out by observations on the Pacific slope of Los Angeles County, where the spring movement is by far the most conspicuous.



This place is so small in extent that changes in quantity & quality of its avifauna can be easily noted. Kingbirds are more numerous today than ~~when~~ we first arrived, as are also orioles (Bullock), & yellow warblers. A Phainopepla is about in the peach trees. Besides the Savanna Sparrow, another was seen last evening. A flock of 6 or 8 green-wing teal were at the mud-hole this morning. The yellowlegs was alone & shot on the wing as it was flying past. Poorwills are heard & seen. Western & Texas Flycatchers are common. Several Lazuli buntings, including a fully fledged ♂ seen. — Wood pewees

7135 Western Flycatcher ♂
7136 Ash-throated Flycatcher ♂
7137 Cooper Hawk ♀? (ovaries on both sides!)
7138 Black-throated Sparrow ♀
7139 Bank Swallow ♂ im.
7140 Roadrunner ♂
7141 Texas Woodpecker ♂
7142 " " ♀
7143 Texas Nighthawk ♂
1426 Ground Squirrel ♂

Saw a ♂ Western Tanager today, bright red head, and several immatures. Have seen single Western Flycatchers several times, one this evening.

1427 Ammospermophilus ♀
7144 Barn Swallow ♂ im.
7145 Rough-winged Swallow ♂ im.

Among the swallows, which went to roost shortly after sundown in a willow patch last evening, I noted several Rough-winged, an adult (long tail) Barn, & more Bank Swallows. A flock of 18 large duck passed overhead, coming directly across the desert from a little west of north & passing up towards the canyon mouth to the southeast. This is doubtless the direction pursued by migrants in general.

Cushenbury Springs
4000 feet

August 14

7146 White-throated Swift ♂ im.
1428 Peromyscus ♀
1429 Perognathus ♀ jr.
1430 " ♀
1431 Lepus arizonae ♂
7147 Anna Hummer ♂ im.
7148 Cactus Wren ♀ im.
1432 Neotoma ♀
1433 " ♂

Found a family of 5 or 6 Cactus Wrens among cactus & yuccas above the pasture this morning. Also a Mockingbird, Western Flycatcher, & Texas Woodpecker in the same vicinity. A young ♂ Anna Hummer, taken, makes 4 species of hummers found here; a tall-stemmed Castilleja & a kind of thistle growing abundantly about the meadow forms the attraction. Yesterday & this morning heard seen another one or two Tolmie Warblers.

1434 Thomomys ♀

Broke camp this noon & camped up in Cactus Flat, 6000 feet. This presents a curious composition:— large quantities & large-sized tree yuccas & plenty of pinyon, junipers & scrub oaks & a few golden oaks (below the flats in the canyon) & artemisia, etc.

Cactus Flat – 6000 feet

Aug. 15th

1435 Neotoma ♀
1436 Thomomys ♀
7149 Sage Sparrow ♀ im.
7150 " " ♂ im.
1437 Dipodomys merriami ♂
1438 Neotoma ♂
1439 Ammospermophilus ♀
7151 Black-throated Sparrow ♂
7152 Tolmie Warbler ♂ im.
7153 Black-chin Hummer ♂
7154 Wren-tit ♀ im.
1440 Jack Rabbit ♂
7155 Black-throated Gray Warbler ♀
7156 " " " ♀

Tolmie Warblers are heard and seen quite often, doubtless in full fall migration. Trail Flycatchers & Yellow Warblers are also common even out in the dry brush, but most noticeably about the alfalfa patch and apple orchard at Johnston's. Several Bullock Orioles are noted all immatures or ♀♀; also Black-headed Grosbeaks, immatures, are common. Mourning Doves & Mountain Quail visit the springs in great numbers.

Cactus Flat
6000 feet

Aug. 16th

1441 Dipodomys merriami ♂
1442 Perognathus ♂
7157 Alaska Water-thrush ♀ im.
7158 Mountain Quail ♀ im.
7159 Spurred Towhee ♂ im.
7160 Pacific Yellowthroat ♂ im.
7161 San Diego Wren ♂ im.
7162 Plain Titmouse ♂ im.
7163 Bush-tit ♀ im.
7164 Lazuli Bunting ♀ im.
7165 Black-throated Sparrow ♀ jr.
7166 " " ♂ im.
7167 Bush-tit ♂ im.
7168 Western Flycatcher ♀
7169 California Jay ♀ jr.
7170 Black-chinned Hummer ♂
7171 " " ♂
7172 Black-headed Grosbeak ♂ im
7173 Brewer Sparrow ♂ im.
7174 " " ♂ im.
7175 " " ♂ im.
7176 " " ♂ im.
7177 " " ♂ im.
7178 Black-throated Sparrow ♂ jr.
7179 Western Chipping Sparrow ♂ im.

7180 House Finch ♂

7181 Black-chinned Sparrow ♂

7182 " " ♂ im.

7183 " " ♂

7184 " " ♂ im.

7185 " " ♂

7186 Lazuli Bunting ♂

1443 Ammospermophilus ♀

1444 Cottontail Rabbit ♂

Back of Johnston's up a ravine a few rods is the source of his water supply. Along this watered ravine, are many good-sized Golden oaks. Here birds came in numbers. Black-chinned Hummers, adult ♂ & immature males are numerous; one Anna Hummer and a few Allen Hummers also noted. The Alaska Water Thrush was flushed from the ground beneath a clump of willows over the trickle of water, & flew up into a dead oak, where its peculiar teetering of the tail attracted my attention to it, & it was promptly shot. Two Clarke Nutcrackers visited the spring by the road lower down, while I was there this forenoon, & stayed around quite awhile. The most abundant birds are

Cactus Flat
6000 feet

Rock Wrens, Brewer Sparrows and Black-throated Sparrows. The latter are about the only species out in the yuccas on the Flat, and then today I found a family of bob-tailed juvenles apparently just out of the nest! Other birds of this vicinity are: — Rough-winged Swallow (two flying S E overhead); Texas Nighthawk (several appear from rocky hillsides at dusk); Roadrunners (few); Cabanis Woodpecker (one at spring); Slender-billed Nuthatch (one at spring); California Jay (very common in scrub & golden oak belt); Calif. Bushtit (several flocks in scrub oaks); Wrentit (fairly common); Western Gnatcatcher (several among yuccas & pinyons); Pinyon Jay (one flock seen in pinyons at upper end of flat); Spurred Towhee (several); Linnet (very numerous especially about watering places); Mountain Chickadee (quite a number in pinyons); Plain Titmouse (2 or 3 in golden oaks at spring); Western Tanager (many migrating thru); Phainopepla (a scattering flock of about 25 flying straight S E high overhead); Western Flycatcher (one), Black-chinned Sparrow (fairly common in scrub-oak belt below the Flats; adults

in full fall plumage are without the black chin); Arkansas Goldfinch (several); Western Warbling Vireo (several in migration); San Diego Wren (a few in the scrub oaks); Lazuli Bunting (quite common); Canyon Wren (several about the rock piles near the watering places); Western Chipping Sparrow (two shot at spring); Parkman Wren (one at spring).

7187 Texas Nighthawk ♂

August 17

7188 Black-chin Hummer ♂

7189 " " ♂

1445 Gray Fox ♂ 968 × 420 × 128

7190 Calaveras Warbler ♂

1446 Peromyscus ♂

7191 Black-chinned Sparrow ♀ im.

7192 Black-throated Gray Warbler ♀

7193 " " " ♂

7194 " " " ♂

1447 Peromyscus ♂ ad.

1448 " ♂

1449 " ♀ jr.

7195 Wren-tit ♂ im.

7196 " ♀ im.

7197 Plain Tit ♂ im.

7198 Traill Flycatcher ♀

Cactus Flat
6000 feet

7199 Red-shafted Flicker ♂

7200 Brewer Sparrow ♂ im.

Saw several Calaveras Warblers this morning in the spring ravine, & secured an adult ♂ in full fall plumage. Also two Red-shafted Flickers, the one secured smelling pungently of "—" ants! Got a satisfactory view of a Nuttall Woodpecker twice in the golden oaks above Johnston's house. This is of interest as being so near the range of bairdi. Under the golden oaks in the ravine by the water, trapped 3 Peromyscus boylei last night, 2 juvs. & 1 ad. This is exactly like the place where they are so common in the arroyo Seco Canyon above Pasadena. The two Perognathus were taken in the sage flat among the yuccas. Wood Rats (simplex type) are fairly numerous. Also Merriam Chipmunks on the hillsides among the scrub & golden oaks, & Antelope Chipmunks on the sandy yucca & sage flats. Merriam Kangaroos are fairly common, judging by signs, as are also Coyotes. The fox was taken on the sage flat. Jack Rabbits & Cottontails are common; and a few ground squirrels live among the boulder piles. Heard a Poorwill last night around the ranch.

Came to Doble this morning

August 18

Came south across Baldwin Lake (now completely dry save for a grassy spring here and there) past Knight's Ranch, & up over a sage flat to the very base of Sugarloaf, making camp on a grassy ciénega under a clump of willows at about 7500 feet elevation.

7201 Gray Flycatcher ♂ im.
7202 Pygmy Nuthatch ♀ im.
7203 Green-tailed Towhee ♂ im.
7204 " " ♂ im.
7205 " " ♀ jv.
7206 Say Phoebe ♂
7207 Western Bluebird ♀ im.

Aug. 19th

1450 Peromyscus gambeli ♀ Sugarloaf 7500 ft.
1451 " " ♂ " " "
1452 P. eremicus ♂ jv. " " "
1453 " ♀ " " "
1454 " ♂ jv. " " "
1455 " ♀ " "
1456 " ♂ " " "
1457 " ♂ " " "
1458 " ♀ " " "
7208 Gray Flycatcher ♀ im. " 8000 ft.

Sugarloaf
7500 to 9800 ft.

7209	Lutescent Warbler	♀ im.	9800 ft.
7210	" "	♀ im.	" "
1459	Thrashers	♀	7500 "
1460	"	♂	" "
1461	"	♂	" "
7211	Calaveras Warbler	♂ im.	9800 "
7212	Cassin Vireo	♀ im.	8000 "
7213	Green-tailed Towhee	♂	" "
7214	" "	♂	" "
7215	" "	♂ im.	" "
1462	Neotoma	♀	7500 "
1463	"	♀	" "
1464		♂	" "
7216	Slender-billed Nuthatch	♂ im.	9800 "
7217	Audubon Warbler	♀ im.	" "
1465	Eutamias merriami.	♀	7500 "
1466	Ammospermophilus	♂	" "
1467	Eutamias speciosus	♀	8500 "
1468	" "	♀	" "

Left base camp this morning at 6:15 and, collecting along the way, reached the summit of Sugarloaf, 9842 feet elevation, at 9, returning by noon, when a thunder-storm came up. Here at camp, about 7500 feet, is a sage-covered alluvial fan, without trees, whose tip reaches up possibly 300 feet higher to the very base of sugarloaf.

Here sage is mixed with the resinous grease-wood-like bush and the berry-bearing bush. The hills to the east are covered with pinyon, and to the west the slopes are heavily forested with Jeffrey pine. At the head of the fork there is a narrow but well-marked Black-oak belt. Then a belt of firs with a few sugar & yellow pines, up to about 8500 feet; and thence all over the summit plenty of Murray & Limber pines, the latter predominating on the highest ridges. The sage flat & pinyons appear to me to be Upper Austral, for here we find wrentits, bush-tits, Cal. Jays, Merriam Chipmunks, etc. The Black-oak belt, with its ceanothus & manzanita thickets has merriam & spurious chipmunks both, and Gray flycatchers, & Green-tailed towhees. (= Lower Transition) The Fir belt has Fox Sparrows, Creepers, Nutcrackers, (= Upper Transition) But at this date one can tell but little in regards to zones from birds. For species breeding in various zones are all mixed up. For instance, on the very summit of Sugarloaf among the Murray & Limber pines, I today saw mixed companies of warblers (Audubon, Lutescent, Pileolated, Calaveras & Black-throated Gray), along with Mountain Chickadees, & Slender-billed Nuthatches. Saw also on the summit a Cabanis Woodpecker, a family of Blue-fronted Jays, several Juncos,

Sugarloaf
7500 - 9800 ft.

and a few of the non-present rock wrens. Down a little ways, in the scanty chinquapin brush, were at least half a dozen Tolmie Warblers. But the mountain is excessively dry, and I found only a small spring at about 8500 feet in the fir belt. Here was seen a Parkman wren, Clarke Nutcracker; Pileolated, audubon, & Black-throated Gray & Tolmie warblers, Gray Flycatcher, & Red-shafted flicker. On a high ridge to the east the forest changes to Juniper & immense silk-tassel trees. Here was secured a Cassin Vireo, and a few Intermediate warblers as well as Audubons were seen. One Sierra Hermit Thrush was seen in the fir belt. Chipmunks, both Callospermophilus & Eut. speciosus, were numerous in the fir belt. But 3 or 4 Fox Sparrows were noted, these at the spring in the fir belt, where were also seen a half dozen siskins.

1469 Eutamias S. speciosus ♀ Sugarloaf 8500 ft.
1470 " " ♂ " "
1471 " " ♂ " "
1472 " " ♀ " "
7218 Black-throated Gray Warbler ♂ im. 9100
7219 Blue-fronted Jay ♂ jv. "
7220 Cabanis Woodpecker ♂ im. "
7221 Mountain Chickadee ♂ im.

7222	Mountain Chickadee ♂ im.	9800 ft.
7223	Parkman Wren ♂ im.	8500 "
7224	Tolmie Warbler ♂ im.	" "
7225	Stephens Fox Sparrow ♂ im.	" "
7226	" " " ♂ im.	" "
7227	Gray Flycatcher ♀ im.	7500 "
7228	San Diego Song Sparrow ♂ im.	" "
1473	Shoemaker. ♂	" "
1474	" ♂	" "
1475	" ♀	" "
1476	" ♀	" "
1477	" ♀	" "
1478	" ♀	" "
1479	" ♀	" "
1480	" ♀	" "
1481	" ♀	" "
1482	" ♀	" "
1483	" ♀	" "
1484	" ♀	" "
1485	" ♂	" "
1486	[illegible] gambeli ♀ juv.	" "

August 20

7229	Audubon Warbler ♂	" "
7230	Traill Flycatcher ♀	" "
7231	Pileolated Warbler ♀	
7232	Parkman Wren ♂ im.	

Sugarloaf
7500–9800 feet

7233	Parkman Wren	♀ in.	7500 feet
7234	Green-tailed Towhee	♂ in.	" "
7235	" "	♀ in.	" "
1487	Neotoma	♀	" "

This morning at 7 o'clock I saw 26 nighthawks flying east in a scattering flock high overhead. One might consider this a migratory movement, except that later I saw several flying in the opposite direction! Perhaps it was a false start, or a trial start, that is if nighthawks migrate by daylight. At evening several nighthawks and poorwills come around the meadow, but bats are scarce. Cooper Hawks, two or more, appear in this vicinity morning & evenings.

In the willow clumps about the cienega, migrants are common, such as Tolmie & Yellow Warblers, Western Tanager, Bullock Oriole, & Traill Flycatcher. Have also seen here:— Linnets (numerous); Western Bluebird (Common); Clark Nutcracker (heard frequently from the pines on the hills to the eastward); Green-tailed Towhee (a dozen or more in rose thickets); Bush-tit (1 flock); Western Chipping Sparrow (few); Sierra junco (fairly numerous); Turkey Vulture (a dozen down near Knights' slaughter place, also overhead here); Mountain Chickadee (common); Western Gnatcatcher (2 seen); Parkman Wren (several);

Gray Flycatcher (few); Red-shafted Flicker (one);
Mountain Quail (one covey); Mourning Dove (2 pairs);
Black-chin Hummer (few); Cliff Swallow (few).

August 21

1488	Thomomys	♀		7500 ft.
1489	"	♂		" "
1490	"	♂		" "
1491	"	♀		" "
1492	"	♀		" "
1493	"	♀ jv.		" "
7236	Texas Nighthawk	♀	(Shot last evening)	" "
7237	Golden Pileolated Warbler	♀ im		" "
7238	Audubon Warbler	♂ im.		" "
7239	" "	♀ im.		" "
7240	" "	♀ im.		" "
1494	Vireo gilvus gambeli	♀	4E.	" "
7241	Audubon Warbler	♂ im.		" "
7242	Ruf. Hummer	♀		" "
1495	Cardellina rubrifrons	♀		" "
1496	" "	♀		" "
1497	" "	♀		" "
1498	" "	♂		" "
7243	Anna Hummer	♀		
7244	Pileolated Warbler	♀ im.		
7245	" "	♂ im		
7246	Cassin Vireo	♂		

Sugarloaf
7500 ft.

1499	Meotanna	♂	7500 ft.
7247	Brewer Sparrow	♀	" "
7248	Cassin Purple Finch	♀ jv.	" "
1500	Thurberia	♂	" "
1501	"	♀	" "
1502	"	♂	" "
7249	Blue-fronted Jay	♂ im	" "
7250	Green-tailed Towhee	♂ im.	" "
7251	" "	♀ im.	" "
7252	" "	♀ im.	" "
7253	" "	♀ im.	" "

This evening at least 25 violet-green swallows are playing back & forth over the meadow. Last evening 3 Barn Swallow passed over flying S.E. The Texas Nighthawk shot last night was the only one seen, and may have been a migrant or casual visitant from towards Cactus Flat. All the other nighthawks are of the virginianus type. I found several Cassin Purple Finches today feeding along with linnets on the blackish berries so abundant on the sage flat & in the pinyon belt. Also a few Spurred Towhees and several Blue-fronted Jays. Saw a few Brewer Sparrows out in the sage. Several Evening & Black-headed Grosbeaks in the willow clumps near camp. Also Cassin

and Western Warbling Vireos. A Black Phoebe appeared along the stream above camp.

August 22

1503	Thomomys	♀	7500 ft.
1504	"	♂ B.B.	" "
1505	"	♀	" "
1506	"	♂	" "
1507	"	♀	" "
1508	"	♂	" "
1509	"	♀	" "
1510	"	♀	" "
1511	"	♀	" "

This forenoon went up to the spring at about 8500 feet on the north slope of Sugarloaf in the main canyon, or rather, at the head of it. Birds visiting the spring during the hour while I was there from 10 to 11 were:— Red-shafted Flicker (4), Cabanis Woodpecker (2), Clark's Nutcracker (1), Blue-fronted Jay (3), Rufous [?] Hummer (2), Stephens' Fox Sparrow (2), Green-tailed Towhee (3), Sierra Junco (perhaps 25), Audubon's Warbler (perhaps 25); Slender-billed Nuthatch (1) Mountain Chickadee (6); Lutescent Warbler (6), Parkman's Wren (2); Pileolated Warbler (2); Tolmie Warbler (1). This side the spring among the firs in the canyon saw Western Flycatcher (heard also) & Western Woodpewee.

Sugarloaf
7500 - 8500 feet

1512	Neotoma	♀	7500 ft.
1513	Eutamias Speciosus	♀	8500 ft.
1514	" "	♀	" "
1515	" "	♀	" "
1516	" "	♀	" "
1517	" "	♀	" "
1518	" "	♀	" "
1519	" "	♀	" "
1520	" "	♂	" "
1521	" "	♂	" "
1522	" "	♀	" "
1523	Eutamias Merriami	♂	8000 "
1524	" "	♂	" "
1525	" "	♀	" "
1526	Callospermophilus	♀	8500 "
1527	"	♂	" "
1528	Thomomys	♀	7500 "
7254	Sierra Hermit Thrush	♀ jr.	8000 ft.
7255	" " "	♀ im.	" "
7256	" " "	♂ im.	8500 "
7257	Stephens Fox Sparrow	♀ im.	" "
7258	Gray Flycatcher	♂ jr.	8000 "
7259	" "	♀	" "
7260	Cassin Purple Finch	♂ jr.	" "
7261	Olive-sided Flycatcher	♂ im.	" "
7262	Audubon Warbler	♂ im.	8500 "

The Olive-sided Flycatcher, with another, was in the black-oak belt along with a lot of western bluebirds & Tanagers. The Thrushes were down, among black oaks & silk-tassel trees near the sage flat, feeding on the black berries, which are attracting everything now in quail & chipmunks to Tanagers & bluebirds. I saw all three species of chipmunks: speciosus, merriami, & Callospermophilus, at the lower edge of the black oak belt. All are busy gathering cheek-pouches full of seeds of a lupine, Ceanothus, & Ribes. The latter have ripe reddish & smoothish fruits now. The presence of many Ammospermophilus in the open sage flat just west of camp & up to a mile at most of the pines, is a remarkable thing sure. I first became aware of their presence by the characteristic weakish trill with descending inflection. They must be decidedly numerous, for, although seen but 4 times so far, 8 out of 30 traps set today were sprung, & 3 Ammos secured.

7263	Intermediate Warbler	♂ im.	7500 ft.
7264	"	♂ im.	" "
7265	Sierra Junco	♂ im.	" "
7266	Clarke Nutcracker	♂ im.	" "
1529	Thomomys	♀	7500 ft.
1530	"	♀	" "

Sugarloaf
7500 ft.

7267 Cooper Hawk ♀
1531 Thomomys ♀
7268 Tolmie Warbler ♂ im.
7269 Poor-will ♀
7270 " ♂
1532 Thomomys ♀
1533 " ♀
1534 " ♂
1535 " ♀
1536 Ammospermophilus ♂
1537 " ♂
1538 " ♀

August 23

1539 Perodipus ♂
1540 Ammospermophilus ♂
1541 Thomomys ♀
1542 " ♂
1543 " ♀
1544 Peromyscus gambeli ♀
1545 " " ♀
1546 " " ♀
1547 " " ♂
1548 " " ♀
1549 Thomomys ♂
1550 " ♂
7271 Audubon Warbler ♂ im.

7272 Violet-green Swallow ♀ im.
7273 " " ♀ im.
1551 Vespertilio ♂
1552 Perodipus ♀
1553 " ♀
7274 Nighthawk ♂ jr.
7275 Violet-green Swallow ♂ im.
7276 Western Bluebird ♂ im.

August 24

1554 Thomomys ♀
1555 " ♀
1556 " ♀
1557 Neotoma ♀
1558 Peromyscus gambeli ♀
1559 " " ♀ < 4 E.
1560 " " ♂
1561 " " ♂

For the past two nights we have heard the hoot of a horned owl over in the woods across the sage tract. The three perodipus were trapped in the sage flat in the same places with Ammospermophilus. Tail tracks & a few other signs were found sparingly. One time perognathus of some sort was also trapped, but something, probably peromyscus gambeli, had partially eaten it in the trap.

Saragossa Springs
7500 ft.

Broke camp early this morning and came over to Doble again. On the way over, at Knight's ranch, saw several Mountain Bluebirds, and a flock of Horned Larks. Also a flock of the latter at Baldwin Lake, as usual; also at Knight's several Brewer Blackbirds and a raven.

1562 Myotis ♀ (Doble)

Aug 26th (Saragossa Springs)

1563 Peromyscus gambeli ♀ 4E.

1564 Peromyscus ? ♀ 6E.

1565 Neotoma ♂

Came from Doble to Saragossa Springs (7500 ft.) last evening, and this forenoon went over there Holcomb Valley & back. In the latter valley I found a continuation of the arid sage country like upper Bear Valley. There is considerable timber, Jeffrey & yellow pine, and two small cienegas (= "Upper" & "Lower" Holcomb). On the ridges the pines are mixed with pinyon & silk tassel trees. On the north sides of the higher peaks of the south rim of the valley are a few firs. But scarcity of water results in scanty plant & animal life. There Holcomb I saw quite a few Eutamias speciosus & Callospermophilus, a few ground squirrels (Citellus) and one

gray Squirrel (Sciurus). Birds were few in species:— lots of Rock Wrens, Linnets, Western Bluebirds and Audubon Warblers; a few Cassin Purple Finches & Sierra Juncos; Blue-fronted Jay & Cabanis Wdpk heard; one Parkman Wren & One Green-tailed Towhee.

Here at Saragossa Springs is a mixture of Jeffrey Pine, Western Juniper & Silk Tassel Trees, while Pinyons prevail on the south sides of the surrounding low ridges. Birds visit the spring in considerable numbers. Have seen in the vicinity; many Pygmy Nuthatches, 2 Cooper Hawks, Cabanis Woodpecker, Many Western Chipping Sparrows and Juncos, a few Brewer Sparrows, a few Western Bluebirds, one Nighthawk last night; Many Linnets and Cassin Purple Finches, 3 Black-throated Gray Warblers, 1 Western Flycatcher, 3 Gray Flycatchers, 2 Western Gnatcatchers, 1 Slender-billed Nuthatch, 1 Green-tailed Towhee, & several Mountain Chickadees.

1566	Gray Squirrel	♂	Holcomb Valley	7200 ft
1567	Eutamias merriami	♀	Saragossa Springs	7500 ft.
1568	" "	♀	" "	
7277	Gray Flycatcher	♂	" "	
7278	Western Chipping Sparrow	♀	" "	
7279	Mountain Chickadee	♀	" "	
7280	Green-tailed Towhee	♂		

Gold Mountain
7500 feet

7281	Cassin Purple Finch	♂ im.	Saragossa Spg. – 7500 ft.
7282	" " "	♂ im.	" " "
7283	Western Flycatcher	♀ im.	" "
7284	Rock Wren	♂ im.	" " "
7285	" "	♂ im.	" " "
7286	Clarke Nutcracker	♀	Gold Mt. – 7500 ft.
7287	" "	♂	" " "
7288	" "	♂	" " "
7289	Western Bluebird	♂ im.	" " "

Rock Wrens were also common among the rocky ledges near Saragossa Springs, and a single Parkman Wren was seen. The road between the last mentioned place and Doble winds along the north side of Gold Mountain at an elevation averaging about 7500 feet. This north slope is timbered with a mixture of Silver Fir, Western Juniper, & Jeffrey Pine; lower down merging into the Silk Tassel & Pinyon belt. In a canyon I also noted 2 Black Oaks & a few Golden Oaks. In this vicinity I saw 3 Red-tailed Hawks circling overhead; a company of 6 or 8 Nutcrackers out of which 3 were taken in at one shot; one Solitaire lit on a fir; a flock of Bush-tits, many Linnets & a few Cassin Purple Finches in the bushes bearing

blackish berries; several Rufous (or Allen) Hummers; 2 Black-headed Grosbeaks heard; several Juncos; one Green-tailed Towhee; 3 coveys of full-sized Plumed Quail along the road; 1 Cabanis Woodpecker; several Mountain Chickadees; + 2 Creepers.

The only mammal seen was the Merriam Chipmunk, which was the only chipmunk seen also at Saragossa Springs. At the latter place in the sage I saw one Jack Rabbit; also several Ground Squirrels. We were told of a Mt. Lion + cub having been recently seen in the rocks of a jagged hill a half mile or so north of the Springs. Came back to Doble this evening. In the sage above (north of) Doble and at a couple hundred feet greater elevation the cupressoparmophiles were seen. Pinyon Jays are to be heard crying almost constantly. This is the only place we have visited where these birds are actually common. A Nighthawk (*virginianus*) was heard flying over this evening. ("Pe-ent").

Bluff Lake – 7400 feet

August 27

Left Doble at 7:30 this morning and after being held up by two thunderstorms, the first 10 to 11 a.m. very severe with hail, made camp at 3:30 P.M. at the cienega at about 7400 feet elevation on the road between Pine Lake and Bluff Lake. On the way over, we secured a lone Meadowlark at Baldwin Lake, where was also seen 2 Say Phoebes and a number of Killdeers about a wet place below a spring. At the east end of Bear Valley encountered a large flock of Pinyon Jays; saw there also, a Western Red-tailed Hawk, Many Audubon Warblers & Western Bluebirds on the meadows, a Red-shafted Flicker, Sparrowhawks, etc. Along the pastures next to the east end of Bear Lake below Pine Lake settlement saw several Mountain Bluebirds, a few Brewer Blackbirds, many Western Chipping Sparrows, etc.

At our Camp here at the cienega we are just above the black oak belt, & within the lower edge of the Chinquapins. The trees around camp are Jeffrey & yellow pine & silver firs,* the cienega is margined by brakes and there are a few willows along the stream

+ a few indescribables

* Also several Balsam Poplars in the canyon above the lake

7290	Say Phoebe ♂	Baldwin Lake - 6700 ft.	
7291	Western Meadowlark ♂ im.	" " " "	
7292	Blue-fronted Jay ♀ im.	E. Bear Valley,	6800 ft.
7293	Pinyon Jay ♀ im.	" " "	"
7294	" " ♂ im.	" " "	"
7295	" " ♀ im.	" " "	"
7296	" " ♀ im.	" " "	"
7297	Mountain Bluebird ♂	Bear Lake	6700 "
1569	Vespertilio ♂	Bluff Lake	7400 "

August 28

1570	Microtus ♂	Bluff Lake	7400 ft.
1571	" ♀	"	"
1572	Peromyscus gambeli ♂	"	"
1573	Microtus ♀ 3E,	"	"
1574	" ♀	"	"
1575	" ♀	"	"
1576	" ♂	"	"
1577	Callospermophilus ♂	"	"
1578	" ♂	"	"
1579	" ♂	"	"
1580	" ♂	"	"
1581	" ♀	"	"
1582	Eutamias speciosus ♂	"	"
1583	" " ♂	"	"
7298	Western Warbling vireo ♂ im.	"	"
7299	Green-tailed Towhee ♂ im.	"	"

Bluff Lake
7400 feet

7300 Gray Flycatcher ♂ in.
7301 " " ♀ in.
7302 Green-tailed Towhee ♂ in.
7303 Lincoln Sparrow ♂ in.
7304 " " ♂
7305 " " ♀ in.
7306 Sierra Junco ♀ in.

Heard a horned owl last evening. Today saw a Cooper's Hawk & Red-tail near here; also several of the latter down near Counts', where were also several ravens & Turkey Vultures. Heard one thrush, and heard & saw 2 ruby-crowned Kinglets, males in full song, near camp. Also noted Western Warbling & Cassin Vireos; olive-sided, Gray & western Flycatchers, western Wood pewee, & one Red-breasted Sapsucker (immature). The Lincoln Sparrows seem to be co-extensive locally in range with the large-leaved plant so conspicuous in the wettest places above 7000 feet. Haven't seen a single Hummer! Audubon Warblers are about but quiet. Large flocks of Violet-green Swallows flying about over head during the thunderstorm this afternoon. Several Pine Siskins & Cassin Purple Finches about the Cienega. For sparrow-watching, as also as witness now as to escape our notice.

1584 Myotis ♂

1585 Microtus ♀

1586 " ♀

1587 " ♂

1588 " ♀ 4 ℰ

1589 Callospermophilus ♂

1590 " ♀

August 29

7307 Green-tailed Towhee ♀ im.

7308 " " ♂ im.

7309 Ruby-crowned Kinglet ♂

1591 Sciuropterus ♀ (Bear Lake – Coombs')

7310 Parkman Wren ♀ im.

7311 Stephens Fox Sparrow ♂

7312 " " " ♀ im.

1592 Eutamias speciosus ♀

1593 Microtus ♂

1594 Eutamias speciosus ♀

7313 Traill Flycatcher ♀ im.

7314 Gray Flycatcher ♀ jr.

7315 " " ♀ jr.

1595 Eutamias speciosus ♀

7316 Ca[illegible]rnia jay ♂ im

1596 Eutamias speciosus ♀

1597 " " ♂

7317 Golden Pileolated Warbler ♀ im.

Bluff Lake
7400 feet

7318 Golden Pileolated Warbler ♂ im.
7319 Olive-sided Flycatcher ♂ im.
1548 Callospermophilus ♂
1599 " ♂
1600 " ♀
7320 Refous Hummer ♂
7321 Lincoln Sparrow ♂ im.

Saw at least four hummers today - ♂ ♀. rufus-alleni type, females or juveniles. Heard a Townsend Solitaire near camp in full song. Found the whereabouts of several fox sparrows in the heavier chinquapin-manzanita-ceanothus growth above (south of) here. They apparently do not range quite so low as this, at this point. Noted at least a dozen Audubon Warblers in the chinquapin patches. Golden Pileolated Warblers are quite common in the willow thickets, where I also found near here a single pair of California Jays. Juveniles wandered in the area. The nesting season, for the one shot was a bird-of-the-year. The ♂ Ruby-crowned Kinglet was in a fir, as usual, on the sunny side of a hill just as the sun arose this morning. Its song called attention to it. Have also noted here today Western Chipping Sparrows & Robins (few).

1601 Microtus ♂
7322 Green-tailed Towhee ♂ im.
1602 Callospermophilus ♀
1603 " ♂
7323 Sierra Sapsucker ♂ im.
7324 Gray Flycatcher ♂ im.
7325 Tolmie Warbler ♀ im.
7326 Sierra Junco ♀
7327 Lincoln Sparrow ♂ im.
7328 " " ♂ im.
7329 " " ♀ im.
1604 Callospermophilus ♂
1605 " ♀

August 30

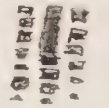
1606 Sciuropterus ♀ (Bear Lake - 6800 feet)
7330 Lincoln Sparrow ♂
7331 " " ♂ im.
7332 Calavera Warbler ♀ im.
7333 Sierra Creeper ♀
1607 Microtus ♀
1608 " ♂
1609 " ♀
1610 " ♂
7334 Sierra Sapsucker ♀
7335 Williamson Sapsucker ♂
7336 White headed Woodpecker ♂

Bluff Lake
7400 feet

7337 Cabanis Woodpecker ♀
1611 Microtus ♀ 5 E.
7338 California Jay ♂ im.
1612 Callospermophilus ♂
1613 " ♂
7339 Western Robin ♂
7340 Green-tailed Towhee ♂ im.
7341 Sierra Junco ♂
7342 " " ♂
7343 " " ♂ im.
1614 Eutamias speciosus ♀

This morning I went up the road over the summit to the spring on the other side of the divide, then back by the way of the Bluff Lake road. I was particularly on the lookout for Fox Sparrows, and it is a mystery to me where they have gone. I saw just one, & heard the Pipilo fuscus-like call note of not more than four more, when six weeks ago fox sparrows were abundant along the entire Of course it may be that they are feeding quietly in the brush; and on the other hand they may have begun a migratory movement, tho it seems to me this is altogether too early. Gray Flycatchers are as numerous as ever, young with querulous cries. Pewees yet

fed by the parents. Saw a scattering flock of fully 25 robins on the summit — kinds of the year, as far as I could see. The ♂ adult shot, was alone in the brush, & in a dilapidated stage of moult. Many Tolmie Warblers are present; also Yellowbacked, Calaveras & Lutescents — conditions as usual. Saw a Cooper Hawk, but one each of Williamson (adult ♂), & Sierra Sapsuckers. Found the embodiment of the latter in a clump of large willows, where it had girdled & killed a half dozen or more of the largest trunks. The incisions in the bark were generally rectangular & in vertical rows, often running together into vertical grooves, thus:



and sometimes also so close together as to obliterate the interval between the up-and-down rows; thus the bark was completely gone so that the tree above the zone of attack was dead or dying. The object was very plainly the sap which collected in the fresh (lower) perforations. Saw one each of Pileolated & Western Warbling Vireos; also another pair of California Jays — a willow patch. Heard the familiar ordinary winter call note of the Kinglet this morning. The Kinglet, — only heard & not seen, — in the morning when [illegible] was searching the foliage of the pines.

Bluff Lake
7400 feet

7344 San Diego Song Sparrow ♀ im.
7345 Lincoln Sparrow ♂ im.
7346 Gray Flycatcher ♂ im.
7347 " " ♂ im.
7348 " " ♀ im.
1615 Vespertilio ♂
1616 " ♀
1617 " ♂
1618 " ♂
7349 Traill Flycatcher ♀ im.
7350 Western Chipping Sparrow ♀
7351 Tolmie Warbler ♂ im.
7352 " " ♂ im.
7353 Sierra Creeper ♂

August 31

7354 Anna Hummer ♀
1619 Callospermophilus ♀
1620 " ♂
1621 " ♀
1622 " ♂
1623 " ♀
7355 Audubon Warbler ♀
7356 Cassin Vireo ♂
7357 Stephens Fox Sparrow ♂
7358 " " " ♂ im.
7359 Green-tailed Towhee ♀ im.

7360 Lincoln Sparrow ♀

7361 " " ♂ im.

7362 " " ♀ im.

7363 Pine Siskin ♀ jv.

7364 " " ♂ jv.

7365 " " ♂ jv.

1624 Microtus ♂

1625 " ♂

1626 Peromyscus gambelii ♀

1627 Eutamias speciosus ♀

1628 Callospermophilus ♀

Saw 2 Western Wood Pewees this evening; they are now scarce & very quiet. Many violet-green swallows busy circling high over the tree-tops. Swarms of a small midge furnish abundant food for these & the flycatchers & warblers. The two more fox sparrows shot today were the only ones seen. Lincoln Sparrows prove to be common but easily overlooked on account of quietness & secretive habits; several of these birds as well as juncos have been caught in mouse traps baited with rolled barley. Saw another company of robins near camp today.

[illegible] today: [illegible] Pewee, Olive-sided Flycatcher, Pileolated & Tolmie Warblers, Pygmy & Slender-billed Nuthatches; Sierra Creeper; Ruby-crowned Kinglet (♂ singing), Traill Flycatcher, etc.

Bluff Lake
7400 ft

7366 White-headed Woodpecker ♀ jv.
1629 Callospermophilus ♂
1630 " ♂
1631 " ♀
7367 Western Robin ♀ im.
7368 Sierra Junco ♀
7369 Lincoln Sparrow ♂ im.
7370 " " ♂ im.
7371 Audubon Warbler ♂
1632 Microtus ♂
1633 " ♀
7372 Western Bluebird ♂

September 1

7373 Western Wood Pewee ♀ im.
1634 Eutamias speciosus ♂
1635 " " ♂
7374 Sierra Creeper ♂ im.
7375 Ashy Kinglet ♂ im.
7376 Parkman Wren ♀ im.
1636 Eutamias speciosus ♂
7377 Cassin Vireo ♂
7378 Lutescent Warbler ♂
1637 Peromyscus gambeli ♀ SE.
7379 Audubon Warbler ♀ im.
1638 Callospermophilus ♂
7380 Gray Flycatcher ♂ im.

7381 Lincoln Sparrow ♀ im.

7382 " " ♀ im.

1639 Callostermopticus ♂

7383 Green-tailed Towhee ♂ im.

7384 " " ♂ im.

7385 Sierra Creeper ♀

7386 Lutescent Warbler ♀ im.

7387 Audubon Warbler ♂

1640 Botaurus sp. ♂

7388 Slender-billed Nuthatch ♂

7389 Sierra Junco ♂ jr.

7390 " " ♂ im.

7391 " " ♂ im.

7392 " " ♂ im.

1641 Myot. ♂

September 2

1642 Sorex ♀

7393 Williamson Sapsucker ♀

7394 Red-breasted Nuthatch ♀

1643 Microtus ♀

1644 " ♀ 4E.

1645 " ♀

1646 " ♂

1647 " ♂

7395 Green-tailed Towhee ♂ im.

7396 Sierra Junco ♀

Bluff Lake
7400 feet

7397 Sierra Creeper ♀ im.
7398 Traill Flycatcher ♂ im.
7399 Gray Flycatcher ♂ im.
7400 Parkman Wren ♀ im.
7401 Pileolated Warbler ♀ im.
1648 Callospermophilus ♀
1649 Peromyscus gambeli ♂
1650 Gray squirrel ♀

This morning about 7 o'clock I heard a familiar note over the next ridge east — the wă-wă-wă-wă, in nasal key, of the Canada Nuthatch. And this time I saw the bird at the top of a Jeffrey pine, and a long aux shot brought it down— an adult ♀ just acquiring annual plumage. This was the only one seen, tho there were doubtless others in the tall thick-topped trees indiscernible on account of the wind. Thus I am now sure of the authors of these same notes heard at Dry Lake & Bluff Lake in June & July. The Red-breasted Nuthatch appears to be the rarest summer bird of these mountains. Pygmy & Slender-billed Nuthatches are also common in this vicinity. I have come to the conclusion that the fox sparrows are here still in undiminished numbers but very elusive owing to the [illegible]

lisp call-note only at long intervals.
Green-tailed towhees are common, & less retiring.
The majority of the audubon Warblers here now, judging from those shot, are adults. This accounts for the fact that all those shot down on the meadows (at Sugarloaf for instance) were birds-of-the-year. Which lends support to the idea that it is really the young birds that become restless & leave the feeding grounds first. I have several times recently seen what I thought a weaning performance — an apparently adult bird resenting vehemently the food-pitilaining advances of immatures, flying at them & driving them off. Perhaps this discouraging procedure on the part of the parents helps to promote the early departure of the young.
Dixon has been up to Bluff Lake meadow the last two evenings trapping; and neither he nor I have seen even one Nighthawk. It must be that they have migrated already. Another fact was a movement observed at Sugarloaf Wednesday 10 days or so ago. They were, — apparent, — pipits, heard & seen, overhead evening, and even all day.

Bluff Lake, 7400 feet.

7402 Parkman Wren ♀ im.
1651 Myiotis ♂

September 3.

7403 Sierra Junco ♀ im.
7404 Sierra Creeper ♀ im.
1652 Callospermophilus ♀
1653 " ♀
1654 " ♂
7405 Hermit Warbler ♂
7406 Slender-billed Nuthatch ♀
7407 Calaveras Warbler ♂ im.
7408 " " ♂ im.
1655 Thomomys ♂
7409 Lutescent Warbler ♀ im.
7410 " " ♂ im.
1656 Microtus ♀
1657 " ♀
1658 " ♀ 6 E.
1659 " ♂
1660 " ♀
7411 Pileolated Warbler ♂
7412 Audubon Warbler ♂ im.
7413 Tolmie Warbler ♀ im.
7414 " " ♀ im.
7415 Gray Flycatcher ♂ im.
7416 " " ♀ im

7417 Sierra Junco ♂ im.
1661 Entarnira ~~species~~ ♂
1662 " " ♂

7418 Western Bluebird ♂
7419 Western Robin ♀

This evening Prof. Perkins and I went over & photographed the sapsucker workings before described. A curious thing is that there has been but the one willow-clump attacked out of dozens near-by. This is rendered conspicuous by all the upper branches, above 2 to 4 feet being dead, with the bark weathered off & the stalks ~~of~~ shiny bare. This clump must have been worked for at least 3 years, for on several of the trunks, which are by the way 3 to 5 inches in diameter, there are three zones of borings, and just below each of these girdlings is a ring of sprouts.

This morning at about 6:30 I shot an adult ♂ Vermiculated Warbler & saw another; they were in a willow clump over a mile & a half from camp. I found a considerable number of warblers in a willow patch feeding in the foliage very quietly. If the wind had stirred the foliage, they

Clarke Grade
4000 - 7500 feet

would have mostly been liable to be overlooked. Found a forlorn-looking moulting ♂ robin secluded in a willow thicket, while elsewhere was a good sized flock of full plumaged immatures.

September 4

Broke camp & left at 8:45 this morning, reaching Clarke's Ranch at 11; left there at 12:30 and arrived at foot of grade in Bear Creek Canyon at 3; and keeping on down the Santa Ana made camp this evening at 5 o'clock at the confluence of Alder Creek. There was frost on a meadow at Bluff Lk this morning, while down here this evening it is decidedly warm — a marked drop in isotherms. On the Clarke Grade Dixon shot two black-chinned sparrows, & I saw several White-throated Swifts. At Clarke's Ranch was a family of adults & young Anthony Towhees; also one Green-tailed towhee, California jays, Wren-tits, Bush-tits. Below Clarke's a little ways on the grade, I saw two Bell Sparrows, 2 Black-chin Sparrows, 2 Anna Hummers, several Mountain Quail, & a couple of Rock Wrens. Here in the canyon birds are notably scarce — The

summer birds (orioles, Vireos & hummers) seem to be entirely absent. The most noticeable birds are the Canyon Wrens, one of which is just now singing several modifications of the descending-scale trill. Have also seen hereabouts this last hour:- Anthony Towhee, California jay, Intescent Warbler, & Nuttall Woodpecker, & Arkansas Goldfinch.

Sept. 5

Left camp at Alder Creek at 4:00 o'clock this morning and walked to Mentone by 6:10, where I took the train for home.

Thus endeth the San Bernardino Mountain Expedition!

1907

July 23

Came from Pasadena to Seven Oaks. On the wash at the mouth of Mill Creek saw several Western Lark Sparrows, Phainopeplas, & California Shrike. Among the blocks in the old sandstone quarry in the mouth of Mill Creek Canyon saw a Canyon Wren. Also near there, several Green-backed Goldfinches.

July 24

Came up to our "Cedar Cabin" camp this morning. Saw another of the olive-backed garter-snakes in edge of stream.

July 25

Went up to mesa to the south of here, where there are many black oaks, firs and yellow pines. Saw a ♂ Black-chinned Hummer, a single California Woodpecker, a pair of Western Gnatcatchers, besides many of the usual species.

2165 Peromyscus gambeli ♂ } Caught in tent, where
2166 " " ♀ } in a barley sack, they had
built a globular nest of cot

7925 Pygmy Nuthatch ♀ jv.
7926 Lazuli Bunting ♂ im
7927 Black-throated Gray Warbler ♂ im.
7928 " " ♀ im
7929 Mountain Chickadee ♂

7930 Audubon Warbler ♂
7931 Western Chipping Sparrow ♀ jv.
7932 Sierra Junco ♂ jv.
7933 " " ♂ jv.
7934 " " ♀ jv.

July 26

Went down along the Santa Ana about a mile. Nothing of note, except a Cuemidophorus tejonegeri taken on hot north (upper Sonoran) bank of canyon. He was 13 ¼ inches long and in process of moult.

7935 Anna Hummer ♀
7936 " " ♀
7937 Lawrence Goldfinch ♀ jv.
7938 Lutescent Warbler ? jv.
7939 Sierra Creeper ♀
7940 Slender-billed Nuthatch ♀ jv.
7941 Western Warbling Vireo ♂ im
7942 Black-throated Gray Warbler ♀ im.
7943 Olive-sided Flycatcher ♂
7944 Western Robin ♀
7945 Sierra Hermit Thrush ♂ jv.
7946 " " " ♂ jv.

July 27.

Went down to Seven Oaks and back this morning. About half a mile this side of

Lewies I saw a single Plain Titmouse in a golden oak, one Townsend Solitaire flying beneath Jeffrey pines and one White-headed Woodpecker. Down nearer Seven Oak, saw a Black Phoebe, three Robins on a meadow, many young Bluebirds (Western), some California Jays, etc. The Spurred Towhees have left nea

July 28

Just at dusk this evening an immature Anthony Towhee, calling loudly, appeared in the brush by camp, evidently a wanderer from below. He was alone, and I last heard him in the sage up the canyon.

August 5

2167	Thomomys altivallis	♂	205 x 57 x 30
7947	Western Gnatcatcher	♂	5700 ft. alt
7948	Bell Sparrow	♂ im.	" "
7949	" "	♀ im.	" "
7950	" "	♀ im.	" "

This forenoon I went up across the brushy gentle slope north of us which lies towards the range separating us from Bear Valley. This slope and the foothills beyond are typically Upper Sonoran, such plants prevailing as: Scrub oak, buckbrush (Ceanothus), Yucca whipplei, a species of

cacti thus with quantities of sticky berries; two species of manzanita; Cercocarpus betulaefolius, etc. Birds observed in this belt were: Bush tit (large flock); Western Gnatcatcher; Linnet; Bell Sparrow (several families); Black-chinned Sparrow; Spurred Towhee (common); Calif. Jay (many); Anthony Towhee (3 or 4); Pasadena Thrasher (3 or 4); Western Red-tail (2); Green-backed Goldfinch (many).

Aug. 7

7951 Black-chinned Hummer ♂ im.

7952 Parkman Wren ♂ im.

7953 Audubon Warbler ♂ im.

7954 Lazuli Bunting ♂

7955 Bell Sparrow ♀

7956 " " ♀ im.

2168 Vespertilio fuscus ♂

2169 " " ♂

7957 Cabanis Woodpecker ♀

Aug. 8

2170 Eutamias merriami ♀

I was stung last night by a scorpion — a medium sized species which often appears from the logs we burn. My coat had been lying on the ground the previous night, and then hung up for the day. I put it on

in the evening, and put my hand in the pocket to get a cyanide bottle I had slipped in, and my hand came in contact with the scorpion. There was immediately an acute sharp pain, very startling. But within 10 minutes this had dwindled to insignificance. (The sting was on the base of my thumb.) For an hour, or until I went to sleep, a dull numb feeling possessed my whole arm. But every symptom had gone next morning, save that the immediate point of puncture was sore to the touch (for 2 days after). There was no swelling at all. On the whole it was about the same as a bee-sting.

Aug. 13

2170 Peromyscus truei ♂ (Caught in tent)

Aug. 16

2171 Peromyscus sonoriensis ♂ " " "

Aug. 17

Went up and fished in head of South Fork thru the cienega, securing 24 trout of a different species from the one (introduced) in the lower stream. The cienega trout is slender with heavy spotting. It may represent the species originally in these waters, the introduced species having been unable to get up so far because of the

high falls. The latter may have come into ~~existence~~ later or replaced others, as the streambed in the deep canyon changed. In a cienega on the Baxter trail (7500 feut), saw a family of bob-tailed Lincoln Sparrows, very young for this late date. One taken.

Aug. 19

7958 Lazuli Bunting ♀
7959 Gray Flycatcher ♂ im.
7960 San Diego Song Sparrow ♀ im.
7961 Western Golden-crowned Kinglet ♂ jr.
7962 " " " ♂ im.
7963 " Wood Pewee ♂
7964 Cassin Vireo ♂ im.
7965 " " ♂ im.
7966 " " ♀(?) im.

August 22, 1907.

Broke camp and came to Pasadena.

Birds

Columbus californicus ×	6 ♀♀ 4 ♂♂ 10 nats.	20	✓
Sterna forsteri ×	2 ♂♂ 2 ♀♀	4	✓
(illegible) ×			
Querquedula cyanoptera ×	1 ♂	1	✓
Anas boschas ×	1 ♂	1	✓
Nettion carolinensis ×	1 ♀	1	✓
(illegible) ×			
Fulica americana ×	1 ♂ 1 ♀ 16 nats.	18	✓
(Ardea herodias) ×			
Himantopus mexicanus ×	1 ♀ jv.	1	✓
(Hectica americana) ×			
Phalaropus tricolor ×	3 ♂♂ 2 ♀♀	5	✓
(Gallinula galeata Bonap.) ×			
Helochromas s. cinnamomeus ×	1 ♀	1	✓
2. Symphemia s. inornata ×	1 ♂ 2 ♀♀	3	✓
1. Actitis macularia ×	1 ♀	1+1	✓
2. Oxyechus vociferus ×	1 ♂ jv.	1	✓
3. Oreortyx p. plumiferus ×	4 ads. 8 juvs.	7+12	✓
(illegible) ×			
4. Zenaidura macroura ×	1 ♂ 3 juvs.	4	✓
(Callipepla gambelii) ×			
5. Accipiter cooperi ×	4 juvs.	1+4	✓
(illegible) ×			
6. Asio wilsonianus ×	1 ♂	1	✓
(illegible) ×			
7. Megascops flammeola ×	1 ♂	1	✓
(Ceryle alcyon) ×			
8. Asio m. pacificus ×	1 ♂	1	✓
9. Geococcyx californianus ×	1 ♂	1	✓
0. Dryobates v. hyloscopus ×	5 ads. 3 juvs.	1+1+8	✓
1. Dryobates s. baindi ×	2 ♂♂ 2 ♀♀	4	✓
2. Dryobates nuttalli ×	1 ♂ 1 ♀	2+2	✓
(illegible) ×			
3. Xenopicus a. gravirostris ×	5 ads. 4 juvs.	9	✓
4. Sphyrapicus v. daggetti ×	4 ads. 3 juvs.	7	✓
5. Sphyrapicus thyroideus ×	4 ♂♂ 3 ♀♀ 2 juvs.	1+2+9	✓
6. Colaptes c. collaris ×	2 ♂♂	2	✓

27.	Phalaenoptilus n. californicus ×	4 juvs.	4	✓
28.	Chordeiles v. hesperus ×	4 ♂♂ 9 ♀♀ 1 juv.	4+14	✓
29.	Chordeiles texensis ×	3 ♂♂ 1 ♀	4	✓
	(Cypseloides niveus) ×			
30.	Aeronautes melanoleucus ×	5	5	✓
31.	Trochilus alexandri ×	5 ♂♂ 2 ♀♀	1+1+7	
32.	Calypte costae ×	3 ♂♂ 1 ♀	4	
33.	Calypte anna ×	2 ♂♂ 2 ♀♀	2+4	
34.	Selasphorus rufus ×	4 ♀♀	4	<So
	(Selasphorus alleni) ×			
35.	Stellula calliope ×	7 ♂♂ 4 ♀♀	8+11	
36.	Tyrannus verticalis ×	1 ♂ 1 ♀	2	2
37.	Myiarchus cinerascens ×	2 ♂♂ 2 ♀♀	1+4	
38.	Sayornis saya ×	3 ♂♂ 1 ♀	4	
	(Sayornis nigricans) ×		1	
39.	Nuttallornis borealis ×	3 ♂♂ 1 ♀ 3 juvs.	3+7+1	
40.	Contopus richardsoni ×	5 ads. et juvs.	1+4+5	
41.	Empidonax difficilis ×	5 ims.	3+5	
42.	Empidonax traillii ×	8 ads. et juvs.	8	
43.	Empidonax cinereus	67 ads. et juvs.	22+67+1=9	
	Otocoris a. actia ×	4 ♀♀ 3 ♂♂	1+7	✓
45.	Cyanocitta s. frontalis ×	10	10	✓
46.	Aphelocoma californica ×	5	5	✓
	(illegible) ×			
47.	Nucifraga columbiana ×	11 ads. et juvs.	11	✓
48.	Cyanocephalus cyanocephalus ×	7 ads. 17 juvs.	24	✓
49.	[illegible] neglecta ×	1 ♂ im.	1	
	[illegible] ×			<
50.	Corvus c. nelsoni ×	2 ♂♂	2	✓
51.	Corvus b. hesperis ×	2 ims.	2	✓
52.	Euphagus cyanocephalus. ×	2 ads. 2 ims.	1+4	✓

	[illegible]	x	3	
	(Carpodacus p. californicus)	x	4	
53.	Carpodacus cassini	x	11 ♂♂ 3 ♀♀	17+14	✓
54.	Carpodacus m. frontalis	x	4 ♂♂ 1 ♀	3+5	✓
55.	Astragalinus ps. hesperophilus	x	1 ♂ 1 im.	2+2	✓
56.	Astragalinus [illegible]	x	2 ♂♂ 2 ♀♀	1+2+4	✓
57.	Spinus pinus	x	6 ads. 4 juvs.	1+10	✓
58.	Passerculus s. alaudinus	x	1 ♀ im.	1	✓
59.	Chondestes g. strigatus	x	1 juv.	1	✓
60.	Spizella s. arizonae	x	20 ads. et juvs.	1+5+20	✓
61.	Spizella breweri	x	65 ads. et ims.	3+65	✓
62.	Spizella atrogularis	x	9 ads. et ims.	9	✓
63.	Junco h. thurberi	x	13 ads. 7 ims. 8 juvs.	3+17+28	✓
64.	Zonotrichia l. leucophrys	x	4 ads. 18 ims.	22	✓
65.	Amphispiza b. belli	x	1 ♂ 3 juvs.	5+4	✓
66.	Amphispiza b. canescens	x	3 ims. 2 juvs.	5	✓
67.	Melospiza c. cooperi	x	2 ♂♂ 3 juvs.	1+5	✓
68.	Melospiza lincolni	x	23 ads et ims.	23	✓
69.	Passerella [illegible]	x	32 ads. 9 juvs.	1+41	✓
70.	Pipilo m. megalonyx	x	1 ♂ 4 juvs.	1+5	✓
	(Pipilo [illegible])	x			
71.	Oreospiza chlorura	x	32 ads. + ims.	6+32	✓
72.	Zamelodia melanocephala	x	2 ♂♂ 1 ♀	5+3	✓
73.	Cyanospiza amoena	x	4 ads. 5 ims.	3+7+9	✓
74.	Piranga ludoviciana	x	6 ads. et ims.	3+6	✓
	(Progne [illegible])	x			
75.	Hirundo erythrogastra	x	1 im	1	✓
	(Hirundo [illegible])	x			
76.	Riparia riparia	x	1 im.	1	✓
77.	Stelgidopteryx serripennis	x	1 im.	1	✓
78.	Hirundo th. fixipida	x	5 ads. et ims.	5	✓

Lanius l. gambeli x
[illegible] x

x

79.	Vireo g. swainsoni x	8 ads. et ims.	1+ 6+ 8
80.	Vireo s. cassini x	3 juvs. 19 ads. et ims.	3+6+ 22
81.	Vireo b. albatus x	1 ♂	1
82.	Helminthophila r. gutturalis x	1 ♂ 4 ims.	5
83.	Helminthophila c. lutescens x	16 ads. et ims.	1+ 1+ 16
84.	Dendroica æ. brewsteri x	1 ♂ 1 ♀ 3 ims.	2+ 5
85.	Dendroica auduboni x	11 ims. 13 juvs. 12 ad. ♂♂ 6 ad. ♀♀	2+7+ 42
86.	Dendroica nigrescens x	19 ads. et ims.	3+ 8+ 19
	(Dendroica occidentalis) x		< See 9
87.	Seiurus n. notabilis x	1 ♀ im.	1
88.	Geothlypis tolmiei x	9 ims.	9
89.	Geothlypis t. arizela x	1 ♂	1
90.	Wilsonia p. chryseola x	11 ads. et ims.	2+11
91.	Cinclus mexicanus x	2 ♂♂	1+ 1+ 2
92.	Minus polyglottos leucopterus x	1 ♀ juv.	1
	(Toxostoma rufum montanum pasadenense) x		
93.	Heleodytes b. couesi x	1 ♂ 1 im.	2
94.	Salpinctes obsoletus x	18 ads. et ims.	2+18
95.	Catherpes m. punctulatus x	1 im.	1
96.	Thryomanes b. charienturus x	6 ims.	6
97.	Troglodytes a. parkmani x	16 ads. et ims.	1+ 4+ 16
98.	Certhia a. zelotes x	17 ads. et juvs.	1+ 4+ 17
99.	Sitta c. aculeata x	7 ads. et ims.	1+6+ 7
100.	Sitta pygmæa x	5 ads. et juvs.	1+6+ 5
101.	Bædophus inornatus x	2 ims.	2
102.	Parus g. ambeli x	14 ads. et ims.	1+ 10+ 14
103.	Chamæa f. fasciata x	4 ims.	4
104.	Psaltriparus m. minimus x	4 ims.	4

	(Regulus s. olivaceus)	5 jv. 5 im	2	
105.	Regulus c. cinnamomeus ×	3 ♂♂	3	✓
106.	Polioptila c. obscura ×	1 ♂ 1 ♀	1+2	✓
107.	Myadestes townsendi ×	7 ads. 3 juvs.	10	✓
108.	Hylocichla g. sequoiensis ×	10 ads. 6 juvs	3+5+16	✓
109.	Merula m. propinqua ×	2 ♂♂ 5 ♀♀ 3 juvs.	2+3+10	✓
110.	Sialia m. occidentalis ×	8 ads. 12 juvs	9+20	✓
111.	Sialia arctica ×	3 ♂♂ 1 ♀ 1 juv.	5	✓
112.	Dendroica occidentalis ×	1 ♂	1	✓
113.	Sitta canadensis ×	1 ♀	1	✓
4.	Selasphorus alleni ×	8 ♀♀ 1 ♂ im.	5+9	
115.	Icterus parisorum ×	1 jv.	1	✓

Total — — — 985 Birds,
In 1906 — 228
In 1907 — 47
Grand Total 1260

116. Cyppseloides niger borealis ×
117. Carpodacus purpureus californicus ×
118. Loxia curvirostra stricklandi ×
119. Cathartes aura. ×
120 Buteo borealis calurus. ×
121. Falco sparverius. ×
122. Erismatura jamaicensis. ×
123. Hydrochelidon surinamensis ×
124. Ceryle alcyon. ×
125 Corvus corax sinuatus ×
126. Pipilo fuscus senicula ×
127. Nyctiocorax nævius ×
128. Ridgeway's Rail ×
129. Sayornis nigricans ×
130. Melanerpes f. bairdi. ×
131. Golden Eagle. ×
132. Progne subis hesperia. ×
133. Phainopepla nitens. ×
134. Vireo huttoni ×
135. Petrochelidon lunifrons ×
136. Pasadena Thrasher. ×
137. Lanius l. gambeli. ×
138. Ardea v. anthonyi. ×
139 W. Yellow-crown Night Hot.

Mammals

1.	Sciurus griseus	6
2	Sciuropterus californicus	1+2
3.	Citellus beecheyi	8
4.	Amniospermophilus leucurus	17
5.	Callospermophilus bernardinus	109
6.	Eutamias speciosus	7+106
7.	Eutamias merriami	1+5+25
	Neotoma (at least 3 species)	2+88
9.	Microtus	1+73
10	Thomomys (at least 2 species)	1+110
11.	Lepus (jack)	2+3
12.	Lepus (cottontail)	5
13	Perognathus (at least 2 species)	4+17
14	Dipodomys merriami	4
15.	Pendipus agilis	3
16	Eryphomys torridus	2
17.	Peromyscus (at least 3 species)	1+48+16 = 65
18	Peromyscus gambeli	3+38+45 = 86
19	Procyon	3
20	Mephitis o. holzneri	2
21	Sorex ornatus	5
22	Vespertilio fuscus	2+7+21
23	Pipistrellus hesperus	5
24	Myotis l. longicrus	3+7
25	Myotis ?	5

Total - about 32 species, and 687 specimens

In 1906 -- 117
" 1907 -- 812

Santa Barbara Islands

James C. Johnston ~~April 15 1859~~

I interviewed ~~April~~ at Cactus Flat (his ranch) August 16-1905: — First on Catalina April 15-1859 and lived there 21 years altogether — Johnstons Harbor named for him. He says (Valley) Quail were native on Catalina (there as long as the oldest Indian could remember); but were not on Clemente until taken there from Catalina about 1865 by a Dane by the name of John Gierton & liberated at west end (Galigher's). Ground Squirrels never on Clemente, but native on Catalina. Rattlesnakes native on Catalina, but never on any of the other Islands. Goats put on Catalina from a Spanish brig in 1832 (according to Gov. Pico), and abundant there when he (Johnston) went there in 1859. Goats put on Clemente by Thomas Galigher in 1864. Foxes always on Clemente and Catalina; those from Santa Cruz Id., much richer colored than from the former two Islands. No wild Cats (Lynx) on any of the Islands, nor any other large animals such as Coyote, Lynx, Coon or Badger.

~~255½~~
194.